Steelcase

The Steelcase National Study of Office Environments, No. II

Conducted by Louis Harris & Associates, Inc.

Comfort and Productivity in the Office of the 80s.

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Summary.

A. Introduction

In the fall of 1979, Steelcase, Inc., commissioned Louis Harris and Associates, Inc., to conduct a second major survey of office workers to expand upon the findings of *The Steelcase National Study Of Office Environments: Do They Work?*, conducted for Steelcase in 1978. This follow-up survey, with interviews conducted from January 1 through January 28, 1980, provides information on the attitudes of office workers and the various factors in the office that contribute to their comfort and productivity on the job.

Moreover, as you will see when reading through this report, this new study builds upon the findings of the 1978 report, and relates any changes of attitudes among office workers and executives relative to the wide variety of factors affecting the office environment.

The content of this survey was developed by Louis Harris and Associates with the help and expertise of Steelcase staff members. Louis Harris and Associates was solely responsible for the questionnaire design, field work, analysis, and observations in this report.

This report contains a summary of findings, a detailed analysis of findings, summarized tabular results, and an appendix with methodological descriptions including explanations of the sample design and field methods.

B. Study Design

This study is based on in-home interviews with a national cross section of 1,004 office workers working full-time for six months or more in offices of 25 or more employees, and with 203 executives who have responsibilities for office planning in major corporations. In-depth interviews of approximately 50 minutes were conducted with office workers of different levels — managers to secretaries — who are 18 years or older and living in urban and suburban areas of the top 100 metropolitan population areas of the United States. The questionnaire design was based on findings from a focus group interview with 15 qualifying office workers.

C. Rationale and Objectives

The growth of white collar employment and the accompanying technology continues to be dramatic. If the growth of technology is to continue at a rapid pace, industries will need accurate and timely data about the needs of the people who use their products.

The primary concern of this study is to obtain information which can contribute to the understanding of the relationship between perceived comfort and job performance. Secondly, the study builds on information about the needs of office workers that was uncovered in the 1978 survey.

The study was devised to assist industry managers, planners, and designers by providing them with detailed information about the comfort and productivity of office workers.

The specific objectives of the study were:

- To determine the attitudes and perceptions of office workers towards the factors in the office that contribute to their physical comfort.
- To determine the degree of communication between office workers and executives and the degree of management concern for office workers' comfort.
- To ascertain current measures undertaken by managers of Fortune 1300 corporations to improve their employees' on-the-job performance, particularly in relation to their physical comfort.
- To obtain some indication of the future of productivity measurement in the office.

D. Study Organization

This study is organized into six specific chapters, as follows:

I. Productivity and Comfort
II. Office Conditions and Comfort
III. Energy Conservation, Office Temperatures, and Air Circulation
IV. Lighting
V. Office Chairs
VI. The Future

Note: The terms business executives, executives, and office decisionmakers are used interchangeably in this report to describe the sample of 203 opinion leaders. They are persons responsible for the physical office environment, and who are involved in maintaining the facility and its services and in policymaking regarding the use and type of equipment. They may or may not be responsible for employee relations.

The terms *office workers and employees* refer to the cross section of 1,004 persons employed in offices. They may be managers, professionals, secretaries, or clerical workers, and their job may be at the level of a senior manager, middle to upper middle manager, supervisor, or regular worker.

E. Eight Major Findings

1. While more office workers perceive their pay to be inferior to that of blue-collar workers than perceive it to be better, substantial majorities feel that in their physical comfort on the job and in their ability to communicate with management, they are better off.

Sixty-nine percent of office workers perceive that they are better off than other types of workers when it comes to physical comfort on the job, while only 5% feel they are worse off. Sixty-five percent perceive their general surroundings on the job to be superior. In comparison, only 23% perceive that they are better off in terms of pay, while 37% feel they are not as well compensated as blue-collar workers.

Majorities of office workers also feel they are better off, in terms of their ability to communicate with management, and in terms of their status in society (although 40% perceive their status to be about equal to that of workers in other types of jobs). A plurality feel they are better off in terms of their relationship with management.

Ten percent of office workers are not satisfied with their relationship and ability to communicate with management relative to other types of workers, and this 10% includes a greater proportion (11% to 15%) of younger workers aged 18-29, workers in pool type offices, clerical workers, and government workers who feel they are worse off than other workers in their relationship with management or in their ability to communicate with management.

2. While most office workers have not had their productivity measured in any job they may have held, and a high 36% would consider such measurement very difficult or impossible, a 55% majority personally favor having how much work they produce on the job measured.

Most office workers (58%) feel confident that they produce about the same amount of work as workers in other types of jobs, and 17% consider themselves more productive. Ten percent feel they may be less productive, and another 10% volunteer that they can't be compared to other types of workers.

A surprisingly high 46% of office workers have held a job where their work output was measured, but more (53%) have not. Moreover, while 41% feel that measuring their work might be very or somewhat easy, 45% consider it somewhat or very difficult, and 14% feel it would be impossible to measure their output.

Despite this, a 55% majority favor having their work measured, while 35% oppose it. More likely to consider it difficult or impossible to measure their work are older office workers (40 years of age or older), office workers who spend less than half their time sitting at a desk, and senior managers. In fact, 30% of executives, managers, and supervisors claim it would be impossible to measure their productivity, although a high 65% would favor such measurement if it were instituted. Resistance to measurement of productivity is highest among clerical workers, who favor it by a slim 48-40%.

One key to measurement of productivity must be incentive; fully 87% of office workers feel that those who produce more in a day should be rewarded for their productivity. Most (57%) feel that they should be rewarded with pay raises, although 19% feel promotions are acceptable rewards, and 20% volunteer that pay raises, promotions, and other rewards should be given to these workers. Fully 95% of the office planning executives interviewed agree that rewards should be given for productivity. While 40% perceive pay raises as the most appropriate reward, 45% volunteer that all types of incentives — pay, promotion, and others — should be made available to productive employees.

3. Knowing that if you produce more in a day, you'll be paid better is considered by more office workers (48%) to contribute a great deal to improvements in productivity than any of the other nine possibilities tested, but a high 45% feel that more comfortable heat, air conditioning, and ventilation would contribute a great deal to productivity, and another 26% feel it would contribute somewhat.

Fully 71% of office workers feel that improvements in the temperature and circulation of the air in their offices would contribute to helping them produce more work in a day than they do now. 67% feel the same way about pay incentives.

Sizable majorities also cite more quiet when you need to concentrate on the job (67%) and more encouragement from managers and supervisors (66%) as having the potential for contributing to improved productivity. Smaller majorities add more experience with your job (59%), better or more office equipment (54%), more desks and files that store papers where you can easily find them (53%), and more stability in the office and less moving around of people (51%). Forty-six percent also feel that a more comfortable chair with good back support would contribute to their productivity, a greater 53% feel it would do so only a little or not at all. Similarly, better lighting is perceived by 57-41% to have little potential for contributing to productivity.

The 203 executives with office planning responsibilities who were interviewed for this study are most likely to identify more encouragement from managers and supervisors, more experience with their job, and pay incentives as the top three potential contributors to improved office worker productivity.

4. The Carter Administration's energy regulations have had a noticeable effect on the comfort of office employees. Most office workers and planning executives feel these regulations should stand as they were enacted, but a sizable number feel that they should be changed to a more comfortable temperature range, and about 4 in 10 office workers have suffered noticeable discomfort over the past summer and current winter.

A high 71% of office workers and 93% of executives with office planning responsibilities report that their employees and companies have complied with the Carter Administration's energy conservation regulations restricting office temperatures to no more than 65 de-

grees in winter and no less than 78 degrees in summer.

In the context of these regulations, a 63% majority of office workers say that employees have in general been somewhat or very uncomfortable under the new temperature restrictions, and a 60% majority of executives have been uncomfortable. However, a smaller 37% of office workers actually felt that the temperature in their offices last summer (1979) was too hot, and a similar 39% feel that the temperatures this winter (1979-80) have been too cold, compared with a greater 47% and 44%, respectively, who feel that the temperatures were about right for them.

In response to the regulations, a 63% majority of office workers report that they have dressed differently to cope with the new temperature in their offices, and 37% report that they have used electric fans, space heaters, or other appliances to help make their offices more comfortable.

In the end, support for maintaining the present regulations outweighs support for changing the regulations to a more comfortable temperature range, and relatively few office workers or executives suggest that they be abolished. A 45% plurality of office workers feel that the regulations should stand, 39% feel they should be changed, and 12% feel they should be abolished. Among office planning executives, a greater 45% feel they should be changed, 40% feel they should stand and 12% feel they should be abolished.

Nearly unanimously, office planning executives agree (99%) that "effective energy conservation measures for office buildings should consider not only temperature, but also such factors as humidity and type of heating and air conditioning systems of a building", a significant majority agree (by 76-21%) that "really significant energy conservation in non-residential buildings will occur only when buildings are designed with energy savings in mind."

A 70-22% majority agree that the "present regulations generally have had a positive effect on energy conservation in office buildings," despite the fact that by 57-42%, these executives tend to agree that "the energy conservation regulations as they now stand will adversely affect employee productivity."

5. Having the right temperature and a place to work when they need to concentrate without distractions are two factors perceived to be important to office workers' comfort that many do not now have.

Office workers are by and large satisfied that they now have ten of twelve factors affecting office comfort that they were asked about. However, while a 66% majority of office workers feel that the right temperature affects their comfort a great deal (and this factor ranks fourth in importance to them), a much smaller 43% are now satisfied that they are working with a temperature that is right for them. Similarly, while 61% feel that having a place to work when you need to concentrate without distractions affects their comfort a great deal, and 63% feel it is important for them to have this as part of their job, a smaller 51% feel that they can now work somewhere without distraction.

When asked at the beginning of the interview what two or three things they would change to make their offices more comfortable for them, a relatively high 13% mention better temperature regulation, another 10% to 12% mention more heat or more cooling, and comments related to ventilation, stuffiness, and draftiness make up another 5% to 7% of mentioned improvements. Temperature and air circulation as a general category pull the majority of the responses to this question.

Similarly, among the 70% of office workers who have complained about some type of discomfort, fully half mention a complaint related to temperature or air circulation.

Almost all the other most desired improvements and complaints are generated by crowding and the need for bigger office space, noise, and lack of privacy. These, of course, are closely related to absence of a place to work without distractions.

While a 62% majority of men working in offices are now satisfied with the temperature of their offices, a 53% majority of women are not; a 55% majority of secretaries are unhappy with the temperature of their working environment. While as a group, executives, managers and supervisors are satisfied, professionals are divided, and clerical workers are more often dissatisfied. In general, office workers who spend more time in their workspaces or sitting at their desks are more likely to be uncomfortable with the temperature.

While 67% of office workers in conventional offices say they have a place to work when they need to concentrate without distractions, 52% in open plan offices and 68% in pool type offices do not. As a group, clerical workers are the most affected by this problem. Fifty-six percent do not have a place to concentrate on their work. Majorities of executives, managers, and supervisors (91%), professionals (57%), and secretaries (52%) do have such a place.

The office planning executives interviewed for this study are remarkably accurate in their perceptions of what most office workers do and do not have that affects their comfort on the job. However, 55% think most office workers have the right temperature for them (while 55% of the office workers disagree), and they underestimate the effect of the entire range of possible conditions affecting comfort. This is particularly important in the case of a place to work without distractions. While 61% of office workers feel that having such a place contributes a great deal to their comfort, a relatively smaller 46% of executives feel it affects employee comfort a great deal.

6. Two factors felt by over 7 in 10 office workers to affect their personal comfort a great deal are good lighting and a comfortable chair. Substantial majorities of office workers say they now have both of these.

Fully 85% of office workers feel that good lighting affects their comfort on the job a great deal, and a nearly identical 84% say they now have good lighting. While 73% of office workers feel that having a comfortable chair affects their com-

fort a great deal, an even greater 84% say they now have a comfortable chair.

Most executives with office planning responsibilities are aware of the importance of lighting and chairs to the comfort of office workers. Eighty-three percent feel lighting affects office workers' comfort a great deal, and 82% feel a comfortable chair does the same.

Looking in more detail at office workers' satisfaction with the lighting in their offices, it can be seen that a substantial 81% feel their lighting is about right, not too bright nor too dim, and 88% feel very or somewhat comfortable with their office lighting as it is now set up.

Similarly, 73% are satisfied with the chair they now have, and 89% feel it is very or somewhat well designed for someone in their job. In most cases, however, office workers recognize that other office workers in their office who perform different jobs than they do, have chairs that are not very different from their own, while their supervisors and the management of their companies have chairs that are very different. If given a choice, most office workers would choose what looks like an executive (37%) or managerial chair (28%) for their own office or work-space; they would choose a particular chair because it looks comfortable (43% of replies), has arm support or back support, and is well padded, as well as having mobility and wheels.

In fact, the most important features of a chair to office workers are correct seat height, overall comfort, good lower back support, wheels for mobility, a swivel base, and adjustable seat height. The features for which some office workers perceive an unfilled need is adjustable back height; 57% consider this very important, but a smaller 48% currently have a chair that adjusts in this way.

By far the most important features to most office workers in terms of helping them get their jobs done are good lower back support and wheels for mobility, and these are the two areas where office workers would be most willing to spend more money.

A 56% majority of office workers have experienced backstrain or a tired back. While most office workers attribute this to something they did off the job (40%) or to stress at work (24%), 28% of that 56% majority, however, would attribute the strain to an uncomfortable office chair.

A final indication of the importance of the chair to office workers is the fact that 26% of office workers would take a smaller raise with a specially designed chair for back support and comfort, rather than a larger raise with no comfort improvements. However, the majority (56%) would choose the larger raise. Only two other office improvements are preferred over a larger raise by more than 1 in 4 office workers: 30% would choose control over air conditioning and heating in their offices; and 27% would choose general improvements in comfort over the larger raise.

7. A 53% majority of office workers feel improvements in comfort would enhance their productivity, and 48% feel they would contribute towards better quality in their work.

A clear 79% majority of office workers feel that their immediate supervisor is very or somewhat concerned with their comfort on the job, and a similar 73% feel that way about top management. They also feel by 73-24% that management is concerned about the way comfort affects their job performance, and a 58% majority feel it affects their job performance a great deal.

More specifically, by 53-40% office workers feel that improvements in comfort could lead to their producing more in a day than they do now, and by 48-46%, they feel that improved comfort could improve the quality of their work. The ways in which quality might improve, as volunteered by office workers, are better concentration on the job (32%), increase of productivity (27%), fewer errors (20%), increased efficiency (17%), and increased motivation (17%).

An even higher 75% of office executives feel that their companies are ***very*** concerned about employee comfort on the job. They are in close agreement with office workers about the effect of comfort on job performance; Fifty-seven percent feel it affects job performance a great deal and another 40% feel it affects job performance somewhat. Larger majorities of executives than office workers, however, feel that more comfort would lead to improvements in productivity (63-31%) and in quality of work (59-34%).

Office workers would most often like to get involved in decisions about getting whatever they need to feel comfortable in their job (91% feel it is very or somewhat important for them to have a say in this) and in deciding the most comfortable working temperature for their job (88% consider this very or somewhat important). Another 85% consider a say in having a place to work without distraction important; 83% feel that decisions about the amount of space they need for their job and the type of office chairs they have should include them. Nearly 3 in 4 want a say in the type of desk surfaces and filing equipment they use and in having a place to relax.

A majority of office workers now have at least some say in getting whatever they need to feel comfortable in their job. However, a majority (53%) have no say at all in deciding the most comfortable temperature for their job, although 88% consider this important. Fewer office workers now have a voice in other office decisions than would like to, and while this is most serious in temperature considerations, it also has an impact on lighting (where there is a gap of 54 percentage points between the number who have at least some say and those who consider it important to be involved) and in choosing an office chair (where a gap of 49 percentage points exists between perceived need for and actual say in the decision).

Over 6 in 10 executives feel it is very or somewhat important for office workers to have a say in each of these decisions. And correctly, they perceive that most office workers now have no say in temperature decisions (because the energy regulations deny this choice), but that most do have a say in their overall comfort.

From the executive's viewpoint,

one area where they overestimate how much say office workers have is in choosing their chairs, while 45% of executives estimate that most office workers have a lot of say or some say in this area, a much smaller 26% of office workers actually have a voice in choosing their chair.

8. Since the 1978 study, there seems to have been a dramatic decrease in the use of conventional offices and an increase in the use of the open plan and bullpen types of offices. According to this new 1980 study, 29% of the office workers report they work in a conventional office, down ten percentage points from the 39% who reported it in 1978. The percentage of workers working in the open plan type of office has increased from 30% in 1978 to 36% in 1980, while increases in the bullpen or pool type of office show percentage gains of 14% to 20% during the same period.

While increases in open offices were forecast by executives surveyed in the 1978 study, such major percentage swings in just two years indicate an even more accelerated use of open offices than was anticipated.

F. Conclusion

The second *Steelcase National Study of Office Environments* adds some significant dimensions to previous findings about office worker's satisfaction with and role in shaping their office surroundings. It can be seen first that office workers draw strong connections between their comfort in the office and their job performance, just as they do between their overall satisfaction with their surroundings and job performance. A majority feel that improvements in their comfort on the job will add to their productivity, and both office decisionmakers and the office workers affected by their decisions recognize that there is a potential for fewer errors and more concentration if comfort is improved.

Even more importantly, most office workers, even if they have never had experience with work measurement and even though important segments consider work measurement very difficult and perhaps impossible for their jobs, are personally in favor of having their productivity measured. An essential key to this support, however, lies in the assumption that more productive workers are rewarded — through pay raises, promotions and other rewards. If measurement of their productivity will open up new recognition for them, office workers are in favor of it. Clerical workers, however, are most resistant to this — perhaps because the likelihood of rewards seems more remote to them. Managers in offices will want to approach this neglected group carefully when instituting work measurement procedures.

While pay incentive is still the strongest stimulus to productivity, more comfortable heat, air conditioning, and ventilation is a continuing demand among office workers, who feel it is very important to them, who want to have a say in deciding their most comfortable temperature, who feel a more comfortable temperature would contribute to their productivity a great deal, and who feel they do not now have the right work temperatures.

The effect of the Carter Administration's energy conservation regulations for office buildings has been to make "temperature conscious" groups of office workers even more sensitive to temperature problems by taking away what measure of choice they had in the matter. While extreme discomfort is not felt by a majority of office workers, the fact that a majority have dressed differently, that some groups (particularly secretaries and clerical workers) suffer more than others, and that most executives perceive a negative impact on office productivity, indicates that these regulations have had a profound and not entirely benign influence on comfort in the office environment.

Nevertheless, more office workers stand by the need for the regulations as they are now than suggest that they be changed to reflect a more comfortable temperature range, and most executives feel they have had a positive effect on energy conservation.

The other element of discomfort to which office workers are powerfully attuned is the unmet need for a place to work when they need to concentrate without distractions. As was found in the first study, the need for quiet and privacy is a deeply felt one, and one which many office workers feel is unfilled. Confirmed in this study is the fact that not only is it felt that this affects productivity (67% feel more quiet would contribute to their productivity) but it is a cause for complaints about physical discomfort and inhibits job performance. And again, this unfilled need is less prevalent among office workers in conventional offices than among those in open plan or pool type offices, although clerical workers in pool type offices suffer by far the most. The common problem of office crowding in inflationary times has had a measurable impact.

Smoking also has an effect on worker comfort and productivity. Forty-five percent of the nonsmoking employees surveyed said they were bothered by those who smoke near them. Persons who are most bothered by smokers are professionals and those employed in the health and educational fields.

On the positive side, what is more reassuring is that both good lighting and a comfortable chair, given top priority by office workers for adding to their comfort, are widely available to office workers, and are not causes for dissatisfaction. A significant number of office workers are attracted by chairs that are specially designed for orthopedic support, but very few attribute backstrain or tiredness that they might experience to an uncomfortable office chair.

Overall, office workers are given far more say in the factors in the office which affect their personal comfort than they are in the larger decisions about office planning that were asked about in the first national study. Nevertheless, this study confirms that most office workers want to be involved in all decisions that affect them, and for good reasons, they perceive that their involvement will contribute to their productivity and general job performance, and to improving the offices in which they work.

Chapter I:

Comfort and Productivity.

A. Introduction

This chapter identifies factors affecting office worker productivity and establishes benchmark data on the experience of office workers with productivity measurement and their receptivity to it. It also contains information on the perceived importance of measuring productivity in the future.

B. Background

In the first Harris study on office workers, entitled *The Steelcase National Study of Office Environments: Do They Work?* (1978), executives gave top priority to employee productivity, and over 60% felt that this issue would gain in importance over the next ten years. Office employees, executives, and architects/interior designers felt that there was a connection between office employees' satisfaction with their office surroundings and their job performance.

Who benefits from productivity? The first survey revealed that 73% of the office workers felt that the management group benefited a lot from increased office worker productivity, whereas only 44% felt that office workers themselves benefited a lot.

Who should be responsible for increasing productivity? In the 1978 study, 38% of office workers felt that senior executives, supervisors, and department heads should be responsible for increasing productivity in an organization. Another 40% felt that the employees should be responsible, and 18% felt that both executives and employees should be responsible.

Relationship between office environment and productivity. A 57% majority of the office workers in the 1978 study felt that there was a great deal of connection between being satisfied with their office surroundings and doing their job well. Another 35% felt that there was only some connection. The primary perceived effects of improved working conditions for office workers were perceived to be feeling better about one's job at the end of the day (73%) and getting more recognition for doing a good job (69%).

Potential increases in productivity. In 1978, about 42% of the office workers felt that they certainly did as much work as they could. Another 22% felt that they probably did as much work as they could. Office workers were then asked if they could ***do more work*** in a day if the ***conditions and circumstances*** that they worked in were changed; a substantial proportion (74%) thought they could. (See Tables I-1, I-2.)

Although the 1978 and 1980 questions on changes in the office are not entirely comparable, they both indicate that comfort is an important factor to office employees. In the 1978 study, office workers were asked about their response to general changes in the conditions and circumstances in the office (which could include such things as pay raises, improvements in executive supervision, and better furniture). In the 1980 study, they were asked only about their response to their ***comfort*** in the office.

Perception of personal productivity: 1978*.

Table I-1

Q.: Being honest with yourself, do you feel you and your work colleagues certainly do as much work as you reasonably can, probably do as much as you can, or do you ever feel you could probably do more work?

(Number of respondents)	Total Office Workers (1,047)
	%
Certainly do as much as can	42
Probably do as much as can	22
Could probably do more	34
Not sure/no answer	2

Perception of personal productivity if conditions and circumstances of work were changed: 1978*.

Table I-2

Q.: Well, if the conditions and circumstances you work in were changed, then do you think you could certainly do more work in a day than you do now, or not?

(Number of respondents)	Total Office Workers (1,047)
	%
Could do more	74
Could not	23
Not sure/no answer	3

*From *The Steelcase National Study of Office Environments: Do They Work?* Conducted by Louis Harris and Associates, Inc., for Steelcase Inc., 1978.

C. Productivity in the Office for the 1980's

1. Likelihood of Companies to Increase Their Efforts to Measure and Improve Office Worker Productivity in the 1980's and Office Worker Receptivity:

A convincing majority (75%) of the business executives (office decisionmakers) feel it is likely that their company will increase its efforts to measure and improve office worker productivity during the 1980's. Of this group, 45% feel it is very likely and 30% feel it is somewhat likely.

A slim majority (55%) of office workers would favor having their productivity measured, a significant number (35%) would oppose it, and 10% are not sure.

Likelihood of companies to institute productivity measures during the 1980's.

Table I-3

Q.: Looking toward the 1980's how likely do you think it will be for your company to increase its efforts to measure and improve office productivity — very likely, somewhat likely, hardly likely, or not at all likely?

(Number of respondents)	Total Executives (203)
	%
Very likely	45
Somewhat likely	30
Hardly likely	18
Not at all likely	6
Not sure	1

Office worker receptivity to having their work measured.

Table I-4

Q.: Would you personally favor or oppose having how much work you produce on the job measured?

(Number of respondents)	Total Office Workers (1,004)
	%
Favor	55
Oppose	35
Not sure	10

2. Experience With Productivity Measurement:

Almost half (46%) of the office workers have had a job at some time where the amount of work they produced in a given period of time was measured.

Office workers residing in the West (54%) and South (51%) seem to have more exposure to productivity measurement than do office workers who reside in the East (38%) and Midwest (45%). Office workers at senior management job levels (57%) have more experience with productivity measurement than do regular workers (44%). Moreover, 58% of the employees in government have had a job where productivity was measured, compared to only 36% of the employees in health and education and 38% of the employees in manufacturing.

Less than half (45%) of the executives interviewed indicate that their companies have attempted to measure office worker productivity.

Company attempts to measure office worker productivity.

Table I-6

Q.: For many years, people in jobs like manufacturing, farming, sales, and construction have had their productivity measured by how much work they produce in a given period of time. Has your company attempted to measure how much work is produced in a given period of time by its office workers?

(Number of respondents)	Total Executives (203)
	%
Have attempted to measure	45
Have not attempted to measure	50
Not sure	5

Office worker experience in having productivity measured.

Table I-5

Q.: As you may know, for many years people in jobs like manufacturing, farming, sales, and construction have had their productivity measured by how much work they produce in a given period of time. Have you personally ever had a job where how much you produced in a given period of time was measured?

	(Number of Respondents)	Have Had Such a Job	Have Not	Not Sure
		%	%	%
Total Office Workers	**(1,004)**	**46**	**53**	**1**
Region				
East	(288)	38	61	2
Midwest	(303)	45	55	*
South	(236)	51	48	1
West	(177)	54	46	-
Job Type				
Executive, manager, supervisor	(23)	48	52	-
Professional	(162)	52	46	2
Secretarial	(89)	27	73	-
Clerical	(384)	43	57	*
Job Level				
Senior manager	(54)	57	41	2
Manager	(206)	46	53	1
Supervisor	(172)	47	52	1
Regular worker	(563)	44	55	1
Industry				
Manufacturing	(190)	38	62	-
Government	(147)	58	42	-
Health and education	(74)	36	64	-
Communications and public services	(194)	45	52	3
Business and professional services	(82)	52	46	1
Insurance and real estate	(108)	53	46	1
Banking and investments	(80)	53	48	-

*Less than 0.5%

2a. Ease of Measuring Productivity:

Among office workers, 41% feel it would be very easy or somewhat easy to measure their productivity in the office. Another 23% say it would be somewhat difficult. A significant proportion of the office workers (36%) feel that measuring the productivity of their current job would be *very* difficult (22%) or *impossible* (14%).

Business executives who have previously attempted to measure office worker productivity are somewhat more optimistic about such an undertaking than are executives who have not had this experience.

Of the executives who *have* had experience, 21% feel it was very easy or somewhat easy to measure office worker productivity. Almost half (45%) of these executives feel it was somewhat difficult and 25% feel it was very difficult (23%) or impossible (2%).

Of the executives who *have not* had experience in measuring office worker productivity, 10% feel it would be very easy or somewhat easy to measure it. Another 39% of these executives feel it would be somewhat difficult and 49% feel it would be very difficult (43%) or impossible (6%).

Ease of measuring office worker productivity.

Table I-7

Q.: Do you think it would be very easy, somewhat easy, somewhat difficult, very difficult, or impossible to measure how much work you produce in your current job?

Q.: Did your company find it very easy, somewhat easy, somewhat difficult, very difficult, or impossible to measure the productivity of office workers?

Q.: If it were attempted, do you think it would be very easy, somewhat easy, somewhat difficult, very difficult, or impossible to measure the productivity of office workers?

	(Number of Respondents)	Very Easy	Somewhat Easy	Somewhat Difficult	Very Difficult	Impossible	Not Sure
Office Workers		%	%	%	%	%	%
Ease of measuring how much work produced in current job	(1,004)	23	18	23	22	14	1
Executives							
Ease of measuring productivity of office workers	(92)	3	18	45	23	2	9
East of measuring productivity of office workers if it were attempted	(109)	3	7	39	43	6	2

3. Comparison of Office Worker Productivity and the Productivity of Workers in Other Jobs:

When comparing office worker productivity to the productivity of workers in other types of jobs (such as construction, assembly line, or other blue collar jobs) a majority of office workers agree with most executives that their productivity is similar.

Seventeen percent of the office workers feel they are more productive than workers in other types of jobs, 10% feel they are less productive, and 58% feel they produce about as much as other workers.

Only 9% of the executives feel that office workers are more productive than workers in other types of jobs, while 22% feel they are less productive, and 59% feel they are about the same as other workers.

Comparison of the productivity of office workers to workers in other types of jobs.

Table I-8

Q.: In general, do you feel that office workers are more productive, less productive, or produce about the same amount of work as workers in other types of jobs do?

(Number of respondents)	Total Office Workers (1,004)	Total Executives (203)
	%	%
More productive	17	9
Less productive	10	22
About the same	58	59
Can't be compared (Volunteered)	10	7
Not sure	5	3

4. Importance of Increased Employee Comfort to Improve Office Worker Productivity:

Most executives feel that in trying to improve the productivity of office workers it is important to increase their comfort on the job.

Over three-fourths (84%) of the executives feel it will be very important (33%) or somewhat important (51%) to increase employee comfort on the job when trying to improve office worker productivity.

Women tend to be more concerned about this issue than are men; 46% of the women executives, compared to 29% of the male executives, tend to feel it will be very important to increase employee comfort on the job when trying to improve office worker productivity.

importance of increased employee comfort to improved productivity.

Table I-9

Q.: In trying to improve the productivity of office workers, how important do you feel increased employee comfort on the job will be — very important, somewhat important, hardly important at all, or not at all important?

	Executives		
		Sex	
(Number of respondents)	Total (203)	Male (164)	Female (39)
	%	%	%
Very important	33	29	46
Somewhat important	51	52	49
Hardly important at all	15	17	5
Not at all important	1	2	-
Not sure	-	-	-

5. Changes Which Can Help Increase Office Worker Productivity:

Both office workers and executives feel that office worker productivity can be increased if the following conditions are improved: pay incentives, temperature, ventilation, quiet, more encouragement from supervisors, and job experience.

According to office workers, factors which can help to improve productivity a great deal are: knowing that if they produce more in a day, they'll be paid better (48%); more comfortable heat, air conditioning, and ventilation (45%); more quiet when they need to concentrate on their job (40%); more encouragement from managers and supervisors (37%); and more experience with their job.

Executives rate factors which can improve employee productivity a great deal as follows: more encouragement from managers and supervisors (51%); knowing that if they produce more in a day, they'll be paid better (48%); more experience with their job (46%); more comfortable heat, air conditioning, and ventilation (39%); and more quiet when employees need to concentrate on their job (36%).

- *Knowing that if they produce more in a day, they'll be paid better.* This factor ranks first among office workers (48%) and second among executives (48%). It is especially important to office workers who are 18 to 29 years of age (65%) clerical workers (52%), and persons employed less than six years (55%).
- *More comfortable heat, air conditioning, and ventilation.* This factor ranks second among office workers (45%) and fourth among executives (39%). It is especially important to office workers who are 18 to 29 years of age (52%), women (52%), people who work in a bullpen (pool) type of office (54%), clerical (54%), and regular workers (50%).
- *More quiet when employees need to concentrate on their job.* This factor ranks third among office workers (40%) and fifth among executives (36%). It is especially important to office workers who are 18 to 29 years of age (44%), people who share their office (43%), and office workers in a bullpen (pool) type of office (47%).
- *More encouragement from managers and supervisors.* This factor ranks fourth among office workers (37%) and first among executives (51%). It is especially important to office workers who are 18 to 29 years of age (44%) and people who work in a bullpen (pool) type of office (44%).
- *More experience with their job.* This factor ties for fourth place among office workers (37%) and ranks third among executives (46%). It is especially important to office workers who are 18 to 29 years of age (54%) and persons employed less than six years (42%).

Changes which can help increase office worker productivity.

Table I-10

Q.: A lot of people these days are very concerned about improving productivity — that is, allowing the same number of people to produce more than they used to during the same time period. There's a lot of discussion about what ways are best for improving productivity, and I'd like to know how each of the following alternatives would help you personally to produce more work during a day than you do now. Which do you feel would help a great deal, somewhat, only a little, or not at all in allowing you personally to produce more work in a day than you do now?

Q. As you know, leaders and decisionmakers in all areas of business are currently very concerned about improving productivity. Much discussion has centered on the best ways of increasing productivity, and I'd like to know how you think each of the following alternatives would help employees in your company produce more work during a day than they do now. Which do you feel would help a great deal, somewhat, only a little, or not at all in allowing employees to produce more work in a day than they do now?

	Total Office Workers (1,004)					Total Executives (203)				
	A Great Deal	Some-what	Only A Little	Not At All	Not Sure	A Great Deal	Some-what	Only A Little	Not At All	Not Sure
	%	%	%	%	%	%	%	%	%	%
Knowing that if you (they) produce more in a day, you'll be paid better	48	19	8	23	2	48	29	11	9	3
More comfortable heat, air conditioning, and ventilation	45	26	12	17	*	39	38	13	10	*
More quiet when you (employees) need to concentrate on your (their) job	40	27	13	20	*	36	47	11	6	-
More encouragement from managers and supervisors	37	29	13	21	1	51	39	7	3	1
More experience with your (their) job	37	22	16	25	*	46	43	8	2	1
More desks and files that store papers where you (employees) can easily find them	29	24	13	34	1	28	31	20	21	*
Better or more office equipment such as more photocopiers, computer terminals, or typewriting machines	28	26	17	29	*	26	41	18	14	*
More stability in the office — less moving around of people	26	25	15	33	1	23	38	18	19	2
A more comfortable chair with good back support	26	20	13	40	1	28	31	20	21	*
Better lighting	22	19	13	44	1	30	27	19	24	*

*Less than 0.5%

Most important changes which can help improve productivity.

Table I-10a

Q.: A lot more people these days are very concerned about improving productivity — that is, allowing the same number of people to produce more than they used to during the same time period. There's a lot of discussion about what ways are best for improving productivity, and I'd like to know how each of the following alternatives would help you personally to produce more work during a day than you do now. Which factors do you feel would help a great deal, somewhat, only a little, or not at all in allowing you personally to produce more work in a day than you do now?†

	Total Office Workers (1,002)	Age 18-29 Years (309)	Age 30-39 Years (281)	Age 40 And Over (411)	Sex Male (420)	Sex Female (582)	Office Occupancy Private (338)	Office Occupancy Shared (661)	Type Of Office Conventional (289)	Type Of Office Bullpen (197)	Type Of Office Open Plan (366)	Job Type Executive, Manager, Supervisor (23)	Job Type Professional (162)	Job Type Secretarial (89)	Job Type Clerical (383)	Job Level Senior Manager (54)	Job Level Manager (206)	Job Level Supervisor (172)	Job Level Regular Worker (562)	Length Of Employment Less Than Six Years (602)	Length Of Employment More (398)
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Knowing that if you produce more in a day, you'll be paid better	48	65	45	37	45	51	37	54	44	56	52	9	46	43	52	24	40	52	52	55	38
More comfortable heat, air conditioning and ventilation	45	52	42	42	34	52	38	48	39	54	46	26	41	51	54	31	32	44	50	45	45
More quiet when you need to concentrate on your job	40	44	41	36	40	39	32	43	34	47	42	22	41	42	40	35	33	42	41	41	37
More experience with your job	37	54	36	25	37	37	32	39	35	42	38	22	41	31	37	28	31	35	41	42	29
More encouragement from managers and supervisors	37	44	38	31	34	39	30	41	34	44	39	9	37	37	39	15	33	39	39	36	38
More desks and files that store papers where you can easily find them	29	37	28	23	25	31	19	34	24	42	27	-	28	29	32	7	21	31	33	31	25
Better or more office equipment such as more photocopiers, computer terminals, or typewriting machines	28	37	28	21	25	31	20	32	28	37	27	22	20	29	33	19	21	27	32	30	26
A more comfortable chair with good back support	26	35	26	19	22	29	18	30	21	36	28	4	28	24	30	9	18	28	30	29	21
More stability in the office — less moving around of people	26	31	26	22	24	27	19	29	20	33	28	4	24	24	29	17	22	29	28	25	28
Better lighting	22	29	18	20	18	25	16	26	17	31	24	-	19	17	28	6	14	22	27	23	22

*Less than 0.5%

†The percentages refer to respondents who answered "a great deal"

6. Rewards for Office Worker Productivity:

Office workers and executives agree that office workers who produce more in a day than other office workers should be rewarded. However, even more executives than office workers feel productive workers should be rewarded.

Fully 87% of the office workers and 95% of the executives feel that office workers who produce more in a day than other office workers doing the same job and using the same equipment should be rewarded for doing more work.

Rewards for office worker productivity.

Table I-11

Q.: In general, do you feel that office workers who produce more in a day than other office workers doing the same job and using the same equipment should be rewarded for doing more work, or not?

(Number of respondents)	Total Office Workers (1,004)	Total Executives (203)
	%	%
Should be rewarded	87	95
Should not be rewarded	8	4
Not sure	5	1

6a. Types of Rewards:

Office workers are particularly interested in getting pay raises as a reward for increases in productivity.

Among those who feel that productivity should be rewarded, over half (57%) of the office workers and 40% of the executives feel that office workers should be rewarded with pay raises rather than promotions or other types of rewards.

About 19% of the office workers say they would prefer a promotion over a raise as a productivity reward. Employees who are more likely to prefer promotions are persons from 18 to 29 years of age (23%), persons with managerial or supervisory types of jobs (24%), and professionals (23%). Only 9% of the executives think that office workers should be rewarded with promotions.

Types of rewards for productive employees.

Table I-12

Q.: Do you feel office workers who are more productive *should be* rewarded with pay raises, with promotions, or by some other kind of reward not directly tied to pay or position?

	Office Workers								
		Age			Job Type				
(Number of respondents)	Total (873)	18-29 Years (270)	18-29 Years (249)	40 And Over (353)	Executive, Manager, Supervisor (21)	Professional (142)	Secretarial (79)	Clerical (319)	Total Executives (191)
	%	%	%	%	%	%	%	%	%
Pay raises	57	58	54	59	43	48	70	63	40
Promotions	19	23	19	16	24	23	20	18	9
Other rewards not tied to pay or position	9	6	11	9	14	11	3	8	4
None of these (Volunteered)	1	*	1	1	5	1	-	-	1
All of these (Volunteered)	20	20	21	20	19	27	13	17	45
Not sure	1	1	2	1	5	1	1	1	1

*Less than 0.5%

Chapter II:

Office Conditions and Comfort.

A. Introduction

Chapter II discusses office workers' perceptions of their comfort in relation to other workers, management's concern for office workers' comfort, and factors which affect office worker comfort, executives identification of comfort factors affecting office workers' productivity, office complaints and smoking.

B. Background

In 1978, the first study explored office planning and design in detail and examined the preferences of office workers for various design considerations. Comfort factors were discussed in the context of the office environment's overall impact on job performance and satisfaction.

The 1978 study identified the following characteristics, listed in rank order of importance, as being most important in helping office workers to get their job done well: ability to concentrate without noise and other distractions; heat, air conditioning, and ventilation; access to the tools, equipment, and materials they work with; conversational privacy; lighting; and ability to adjust their work surface, chair, and storage space to suit their work requirements.

In the 1978 study, office workers identified failure to maintain office facilities, lack of space, and an inadequate work area as the primary reasons for their decreased satisfaction with the office environment. More personal space was identified as the most desired change by office workers if they had their say.

C. Comfort in the Office During the 1980's

1. How Office Workers Perceive Their Comfort in Relation to Other Workers:

Sixty-nine percent of the office workers and 90% of the executives feel that office workers are better off than people who work in other types of jobs in terms of physical comfort.

In terms of physical surroundings on the job, 65% of the office workers and 89% of the executives feel that office workers are better off than people who work in other types of jobs.

Office workers' perception of comfort versus that of other workers.

Table II-1

Q.: Comparing office workers to people who work in other types of jobs, do you personally feel that office workers are better off, worse off, or about the same as far as each of these factors is concerned?

(Number of respondents)	Total Office Workers (1,004)				Total Executives (201)			
	Better Off	Worse Off	About The Same	Not Sure	Better Off	Worse Off	About The Same	Not Sure
	%	%	%	%	%	%	%	%
Pay	23	37	31	9	24	26	38	12
Physical comfort on the job	69	5	22	4	90	*	7	2
Surroundings on the job	65	6	24	5	89	1	7	3
Relationship with management	47	10	36	8	61	1	33	4
Ability to communicate with management	52	10	31	7	74	2	24	2
Status in society	50	5	40	6	68	-	27	5
Access to machines and tools that help them get more accomplished in a given period of time	40	9	43	8	32	13	52	3

*Less than 0.5%

2. Factors That Affect Office Worker Comfort and Worker's Priorities:

Office workers indicate that their personal comfort on the job is affected a great deal by good lighting (85%), a comfortable chair (73%), and the opportunity to stretch and move around during the day (69%).

Substantial majorities of executives feel the personal comfort of office workers is affected a great deal by good lighting (83%), a comfortable chair (82%), good circulation of air (70%), and the right temperature (67%).

Employees were asked how important it would be to them to have various conditions, and they gave priority to good lighting (88% say it would be very important), a comfortable chair (73%), good circulation of air (70%), and the right temperature (69%). Executives rank items which they feel are very important for their employees' comfort as follows: a good lighting (87%), a comfortable chair (81%), the right temperature (65%), and good circulation of air (65%).

Factors that affect office worker comfort.

Table II-2

Q.: Do you feel that having (ITEM) would or does affect your personal comfort on the job a great deal, somewhat, hardly at all, or not at all?

Q.: Do you feel that having (ITEM) affects employee comfort on the job a great deal, somewhat, hardly at all, or not at all?

		(Number of respondents)	Total Office Workers (1,003)					Total Executives (203)				
Rank** OW	E		A Great Deal	Some-what	Hardly At All	Not At All	Not Sure	A Great Deal	Some-what	Hardly At All	Not At All	Not Sure
			%	%	%	%	%	%	%	%	%	%
1	1	Good lighting	85	12	1	1	1	83	17	-	-	-
2	2	A comfortable chair	73	22	4	1	*	82	16	1	-	*
3	7	The opportunity to stretch and move around during the day	69	26	4	1	*	50	45	5	*	-
4	3	Good circulation of air	68	28	3	1	1	70	29	1	-	-
5	5	Machines and reference materials within easy reach	67	25	5	2	1	55	37	5	2	-
6	4	The right temperature for you	66	29	3	1	*	67	30	2	*	-
7	8	A place to work when you need to concentrate without distractions	61	27	7	3	1	46	44	8	1	*
8	9	Enough space to move at your desk	57	35	6	1	1	44	52	3	-	*
9	6	Quiet	52	32	11	5	*	53	44	2	1	-
10	12	A window	40	30	19	10	1	18	39	34	7	1
11	10	A place where you can go to relax	37	35	20	8	*	30	48	19	2	*
12	11	The ability to change your office furniture as your job changes	24	33	24	16	4	19	46	25	8	2

*Less than 0.5%

**The ranking is based on respondents who answered "a great deal"

Office worker comfort priorities.

Table II-3

Q.: How important would it be or is it to you to have (ITEM) — very important, somewhat important, not very important, or not at all important?

Q.: How important do you think it is to your employees to have (ITEM) — very important, somewhat important, not very important, or not important at all?

(Number of respondents)			Office Workers (1,004)					Executives (203)				
Rank** OW	E		Very Important	Somewhat Important	Not Very Important	Not Important At All	Not Sure	Very Important	Somewhat Important	Not Very Important	Not Important At All	Not Sure
			%	%	%	%	%	%	%	%	%	%
1	1	Good lighting	88	10	1	*	1	87	12	1	-	-
2	2	A comfortable chair	73	20	5	2	*	81	19	*	-	-
3	3	Good circulation of air	70	26	3	1	*	65	34	1	-	-
4	4	The right temperature for you/them	69	26	3	1	*	65	34	1	-	-
5	5	Machines and reference materials within easy reach	69	25	5	1	1	58	37	3	1	-
6	9	The opportunity to stretch and move around during the day	67	27	3	2	*	40	53	6	*	*
7	7	A place to work when you/they need to concentrate without distractions	63	27	5	4	1	46	44	8	1	1
8	8	Enough space to move at your/their desks	57	36	5	1	1	46	50	4	1	1
9	6	Quiet	53	32	9	5	*	53	44	3	*	-
10	12	A window	40	31	19	9	1	18	45	30	6	1
11	10	A place where you/they can go to relax	38	34	18	9	1	33	43	18	5	-
12	11	The ability to change your/their office furniture as your/their job changes	24	31	25	17	3	28	41	22	7	2

*Less than 0.5%

**The ranking is based on respondents who answered "very important"

2a. Comfort Factors Important to Office Workers and Executives:

Good ***lighting*** is especially important to secretaries (94%), and senior managers (93%).

A ***comfortable chair*** is especially important to women (79%), persons who spend over 75% of their day sitting at their desk (78%) and secretaries (88%).

Good ***circulation of air*** is especially important to office workers who are 40 years of age or more (75%) and secretaries (75%).

The ***right temperature*** is especially important to women (74%) and secretaries (83%).

Additional items which executives feel affect employee comfort and well-being are pleasing decorations, pleasing color schemes, and adequate office space.

Comfort factors important to office workers.

Table II-3a

Q.: How important would it be or is it to you to have (ITEM)*

(Number of respondents)	Total (1,004)	Industry: Manufacturing (190)	Government (147)	Health And Education (74)	Communications And Public Services (94)	Business And Professional Services (82)	Insurance And Real Estate (108)	Banking And Investments (80)	Job Type: Executive, Manager, Supervisor (23)	Professional (162)	Secretarial (89)	Clerical (384)	Job Level: Senior Manager (54)	Manager (206)	Supervisor (172)	Regular Worker (563)	Age: 18-29 Years (309)	30-39 Years (281)	40 And Over (410)	Sex: Male (420)	Female (581)	Time Spent Sitting At Desk: 0-50% (187)	51-75% (285)	76% And Over (527)
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Good lighting	88	89	90	92	90	86	89	88	91	85	94	89	93	86	87	89	85	86	91	85	90	85	87	90
A comfortable chair	73	75	76	81	71	66	67	75	78	71	88	76	70	74	70	75	73	70	76	66	79	60	72	78
Good circulation of air	70	64	72	74	77	66	70	71	65	64	75	69	67	74	73	67	67	65	75	66	72	67	67	72
Right temperature	69	66	71	66	66	56	79	79	48	59	83	72	57	66	72	70	69	66	71	62	74	65	65	72
Machines and reference materials within reach	69	72	69	68	69	60	70	70	57	64	79	70	65	67	73	69	68	66	71	63	73	65	66	71
Opportunity to stretch and move around	67	61	77	65	73	62	71	66	61	64	62	70	72	62	69	68	69	67	67	65	69	67	67	68
A place to work to concentrate	63	58	63	69	63	71	60	66	74	65	62	56	76	72	68	58	62	68	61	66	61	66	61	63
Enough space to move at their desks	57	57	61	51	52	56	63	63	39	51	60	60	52	55	61	57	57	48	63	52	60	51	52	62
Quiet	53	55	50	59	57	54	47	57	57	54	53	50	57	61	57	49	48	58	55	56	51	49	56	53
A window	40	31	43	53	39	46	40	38	48	40	37	42	54	31	47	40	42	40	39	36	43	37	38	43
A place to relax	38	29	42	35	48	29	52	46	13	30	42	43	28	26	41	42	50	31	33	28	45	37	34	39
Ability to change furniture as job changes	24	22	25	22	22	28	28	19	14	19	30	23	28	22	29	22	24	29	19	22	25	21	20	26

*The percentages refer to respondents who answered "very important"

Additional comfort factors important to executives.

Table II-4

Q.: Are there any other things that you feel can affect your employees' sense of comfort and well-being on the job?

(Number of respondents)	Total Executives (202)
	%
Interior Decorating	
Pleasing decorations, aesthetic	14
Pleasing color scheme	11
Art works, wall decorations, paintings	7
Comfortable furniture, chairs, desks	6
Carpeting, rugs	5
Personal effects, things from home	4
Plants	4
All other interior decorating mentions	-
People Management	
Communication between co-workers	8
Sense of being appreciated, their job being important	6
Relationship between workers and boss, supervisor	5
Atmosphere among co-workers, relationship between co-workers	3
Good pay, compensation	3
Attitude towards job	2
All other people management mentions	2
Space	
Office space, layout, walking space	11
Cafeteria, lunch space, kitchen	5
Adequate desk space, work space for job	4
Partitions	3
All other space mentions	-
Environment	
Acoustics, sound control	6
Orderly, neat, clean workspace	5
Parking facilities	3
Restrooms, clean restrooms	2
All other environmental mentions	3
Miscellaneous	
New, up-to-date equipment	7
Coffee, refreshments	2
All other miscellaneous mentions	2
Nothing/none	37

2b. Prevalence and Availability of Comfort Factors:

Majorities of the office workers indicate that they now have the opportunity to stretch and move around during the day (92%), good lighting (84%), a comfortable chair (84%), machines and reference materials within easy reach (83%), and enough space to move at their desk (77%). A lesser proportion of office workers feel that they now have the ability to change their office furniture as their job changes (40%), the right temperature for them (43%), and quiet (48%).

Prevalence of various factors affecting comfort.

Table II-5

Q.: Do you have (ITEM) in your office, or not?

(Number of respondents: 1,004)	Have	Do Not Have	Not Applicable	Not Sure
	%	%	%	%
The opportunity to stretch and move around during the day	92	7	*	*
A comfortable chair	84	15	*	*
Good lighting	84	15	*	*
Machines and reference materials within easy reach	83	15	1	*
Enough space to move at your desks	77	22	1	*
Good circulation of air	64	34	*	1
A window	57	42	*	*
A place where you can go to relax	53	46	1	*
A place to work when you need to concentrate without distractions	51	47	1	*
Quiet	48	49	1	1
The right temperature for you	43	55	1	1
The ability to change your office furniture as your job changes	40	48	8	4

*Less than 0.5%

Some segments of office workers feel they are lacking more than others.

- *A comfortable chair.* Among total office workers, 15% say they do not have a comfortable chair. This number rises, however, among employees in the 18 to 29 year age group (20%), and employees in a bullpen (pool) type of office (22%).
- *Quiet.* Forty-nine percent of the office workers say they do not have quiet in their office. There appears to be fairly uniform agreement among the various segments of office workers about lack of quiet in the office.
- *Good lighting.* Of the total office workers, 15% say they do not have good lighting. This appears to be a particular problem for employees who work in a bullpen (pool) type of office (23%).
- *The right temperature.* Over half (55%) of the office workers say they do not have the right temperature. This deficiency is particularly evident to women (63%) and clerical workers (61%).
- *Enough space to move at your desk.* Twenty-two percent of the office workers say they do not have enough space to move at their desk. This is especially the case for persons who work in a bullpen (pool) type of office (35%).
- *A place where you can go to relax.* Almost half (46%) of the office workers say they do not have a place where they can go to relax. This is especially so for men (55%) and professionals (58%).
- *A window.* The absence of a window, reported by 42% of the office workers, is more prevalent among employees who are located in a bullpen (pool) type of office (47%) and secretaries (48%).
- *Good circulation of air.* About one-third (34%) of the office workers say they do not have good circulation of air. This is especially noted by office workers in a bullpen (pool) type of office (46%) and clerical workers (40%).
- *The opportunity to stretch and move around during the day.* Only 7% of the office workers say they do not have the opportunity to stretch and move around during the day. This does not appear to be more of a problem among any one particular segment of office workers.
- *A place to work when you need to concentrate without distractions.* About half (47%) of the office workers say they do not have a place to work when they need to concentrate without distractions. This is especially the case for employees who work in a bullpen (pool) type of office (68%), and clerical (56%) and regular workers (55%).
- *Machines and reference materials within easy reach.* Machines and reference materials are not within easy reach of 15% of the office workers. This is especially true for professionals (20%).
- *The ability to change your office furniture as your job changes.* About half (48%) of the office workers say they do not have the ability to change their office furniture as their job changes. This is especially true for younger employees (18 to 29 years) (55%), employees who work in a bullpen (pool) type of office (62%), and clerical (55%) and regular workers (54%).

Items not present in office workers' environment.

Table II-5a

Q.: Which of the following items are missing in your office?

(Number of respondents)	Total (1,003)	Age 18-29 Years (310)	Age 30-39 Years (281)	Age 40 And Over (412)	Sex Male (421)	Sex Female (583)	Type Of Office Conventional (289)	Type Of Office Bullpen (198)	Type Of Office Open Plan (366)	Job Type Executive, Manager, Supervisor (23)	Job Type Professional (162)	Job Type Secretarial (89)	Job Type Clerical (384)	Job Level Senior Manager (54)	Job Level Manager (206)	Job Level Supervisor (172)	Job Level Regular Worker (563)
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
A comfortable chair	15	20	16	10	14	15	11	22	14	4	14	11	19	6	8	19	17
Quiet	49	53	48	47	48	50	37	71	50	30	49	42	53	34	41	52	53
Good lighting	15	18	13	15	11	18	10	23	18	-	15	8	19	6	11	15	18
The right temperature for you	55	56	56	54	44	63	52	58	55	48	49	55	61	46	45	58	59
Enough space to move at your desk	22	29	18	18	20	23	14	35	20	4	21	18	26	11	16	23	25
A place where you can go to relax	46	44	47	48	55	40	45	45	49	52	58	37	38	51	50	51	43
A window	42	44	41	42	41	43	39	47	46	22	40	48	44	26	37	44	45
Good circulation of air	34	39	33	32	29	38	26	46	34	35	29	22	40	22	28	33	37
The opportunity to stretch and move around during the day	7	11	6	5	5	9	6	10	8	-	4	4	9	-	6	5	9
A place to work when you need to concentrate without distraction	47	53	44	45	43	50	32	68	52	9	41	45	56	28	36	42	55
Machines and reference materials within easy reach	15	16	17	14	17	14	11	18	17	4	20	7	16	6	17	18	15
The ability to change your office furniture as your job changes	48	55	45	45	45	51	36	62	53	17	53	49	55	24	40	46	54

2c. Executives' Assessment of Comfort Factors:

Large majorities of the executives feel that office workers now have the opportunity to move around during the day (97%), a comfortable chair (95%), good lighting (94%), machines and reference materials within easy reach (90%) and enough space to move at their desks (88%). A lesser proportion of executives feel that most office workers have a window (46%), the ability to change their office furniture as their job changes (47%), a place to work when they want to concentrate without distractions (55%), and the right temperature for them (55%).

Executives' assessment of prevalence of various factors affecting comfort.

Table II-6

Q.: Do you think the majority of your company's employees have the following in their office now?

	Total Executives			
(Number of respondents: 202)	Majority Have	Majority Have Not	Not Applicable	Not Sure
	%	%	%	%
Opportunity to stretch and move around during the day	97	2	*	-
A comfortable chair	95	5	-	-
Good lighting	94	6	-	-
Machines and reference materials within easy reach	90	10	-	-
Enough space to move at their desks	88	12	-	*
Good circulation of air	84	16	-	-
A place where they can go and relax	66	33	1	*
Quiet	60	38	1	*
Right temperature for them	55	41	1	3
A place to work when they want to concentrate without distractions	55	44	-	1
Ability to change their office furniture as their job changes	47	46	4	3
A window	46	52	1	1

*Less than 0.5%

Summary table: factors affecting office worker comfort.

Table II-6a

Q.: Do you have (ITEM) in your office now, or not?

Q.: Do you feel that having (ITEM) would or does affect your personal comfort on the job a great deal, somewhat, hardly at all, or not at all?

Q.: How important would it be or is it to you to have (ITEM) — very important, somewhat important, not very important, or not important at all?

Q.: Do you think a majority of your company's employees have (ITEM) in their office now, or not?

Q.: Do you feel that having (ITEM) affects employee comfort on the job a great deal, somewhat, hardly at all, or not at all?

Q.: How important do you think it is to your employees to have (ITEM) — very important, somewhat important, not very important, or not important at all?

	Total Office Workers (1,004)			Executives Looking At Office Workers (203)		
(Number of respondents)	Feel Affects Comfort A Great Deal	Feel Very Important To Have	Does Not Now Have	Feel Affects Comfort A Great Deal	Feel Very Important To Have	Majority Does Not Now Have
	%	%	%	%	%	%
Good lighting	85	88	15	83	87	6
A comfortable chair	73	73	15	82	81	5
The opportunity to stretch and move around during the day	69	67	7	50	40	2
Good circulation of air	68	70	34	70	65	16
Machines and reference materials within easy reach	67	69	15	55	58	10
The right temperature for you	66	69	55	67	65	41
A place to work when you need to concentrate without distractions	61	63	47	46	46	44
Enough space to move at your desk	57	57	22	44	46	12
Quiet	52	53	49	53	53	38
A window	40	40	42	18	18	52
A place where you can go to relax	37	38	46	30	33	33
The ability to change your office furniture as your job changes	24	24	48	19	28	46

3. Executives' Identification of Comfort Factors Affecting Office Worker Productivity:

Business executives most often rank temperature as the comfort factor which they think will do the most to increase office worker productivity. Other items of importance are a place to work without distractions, machines and reference materials within easy reach, quiet, good lighting and good circulation of air.

Executives' identification of comfort factors affecting productivity.

Table II-7

Q.: Which 3 or 4 items on this card do you feel office workers request *most often*?

Q.: And which 3 or 4 items do you think are *most in need of improvement* for a majority of office employees at your company?

Q.: If they were corrected or improved, which 3 or 4 items would do the most to *increase the overall comfort* of your employees?

Q.: And which 3 or 4 items, if they were corrected, would do the most to *increase office worker productivity* in your company?

	Total Executives			
(Number of respondents: 203)	Would Increase Office Worker Productivity	Requested Most Often	Most In Need Of Improvement	Would Increase Overall Comfort
	%	%	%	%
The right temperature for them	46	77	50	65
A place to work when they need to concentrate without distractions	35	25	35	23
Machines and reference materials within easy reach	33	40	27	19
Quiet	29	24	28	26
Good lighting	24	50	13	22
Good circulation of air	22	36	26	32
Enough space to move at their desks	13	14	15	13
A comfortable chair	13	46	9	22
The ability to change their office furniture as their job changes	9	7	14	7
A place where they can go to relax	3	5	10	7
A window	2	8	4	4
The opportunity to stretch and move around during the day	2	2	2	2
None (vol.)	11	-	12	8
Not sure	2	-	*	*

*Less than 0.5%

4. Office Complaints:

A very high 70% of the office workers have complained at some time about some aspect of their office that they felt was not very comfortable. Over half of these complaints have been about the office temperatures, and other frequent complaints have been about the lack of space and filing area, and excessive noise. (See Tables II-8 and II-9.)

Almost one-third (31%) of those who have complained feel that their job performance was affected a great deal by these discomforts. 49% say it was affected somewhat, and 19% hardly or not at all. In other words, an 80% majority say that their complaints were generated by discomforts that inhibited their job performance. (See Table II-10.)

Office workers say that they generally complained to their supervisor (56%), an office manager (29%), a fellow worker (25%), or an executive (21%). Executives, on the other hand, feel that office workers primarily take their complaints to their fellow workers (50%), and only secondarily to a supervisor (30%) or an office manager (14%). (See Table II-11.)

Of those office workers who filed complaints, 26% were very dissatisfied with the action taken on their complaints, and another 24% were somewhat dissatisfied. However, 46% were very or somewhat satisfied with the results. (See Table II-12).

About one-quarter (28%) of the office workers say that comfort or discomfort in the office is very often a topic of conversation between them and their co-workers.

Only 16% of the executives, however, perceive that comfort or discomfort is very often a topic of conversation among office employees. (See Table II-13.)

According to office workers, the primary topics of conversation relating to comfort and discomfort in the office are temperature and air circulation, lack of space and noise.

Executives feel that the primary topics of conversation among office workers relating to comfort and discomfort in the office are temperature and air circulation, and lack of space. (See Table II-14.)

Frequency of office worker complaints about the office.

Table II-8

Q.: Have you personally ever complained about some aspect of your office that you felt wasn't very comfortable?

(Number of respondents)	Total Office Workers (1,002)
	%
Have complained	70
Have not complained	30

Nature of office worker complaints.

Table II-9

Q.: What was your most recent complaint about? Anything else?

(Number of respondents)	Total (693)
	%
Temperature	
Too cold, not enough heat	15
Too hot, warm	8
Ventilation is poor, place is stuffy or drafty, no windows	8
Temperature fluctuates, never constant, either too hot or too cold	7
We have no control over temperature	3
All other temperature mentions	*
Space	
Not enough space, overcrowded	9
Filing is cramped, not enough filing or storage space, space poorly located	5
Office space is cramped, too many desks, tables, too many people in room	4
Didn't have enough personal work space, desk too small, have to share	3
All other space mentions	1
Physical Environment	
Too much noise	7
Lighting	4
Cigarette smoke bothers me	2
All other physical environment mentions	5
People/Management	
Sloppy/lazy/rude/inefficient co-workers	5
Too much work for me to do, not enough personnel	5
Not being paid enough	1
All other people/management listings	3
Equipment	
Not enough equipment, access to equipment	3
No adequate equipment, need newer equipment	3
All other equipment mentions	4
Interior Decorating	
Decor, color, furniture	-
Don't like my chair, it's uncomfortable, broken	-
All other interior decorating mentions	1
Not sure	1

*Less than 0.5%

Note: The percentages refer to respondents who have complained.

Effect of discomfort on office worker's job.

Table II-10

Q.: Does your discomfort affect your job?

(Number of respondents)	Total Office Workers (697)
	%
A great deal	31
Somewhat	49
Hardly at all	13
Not at all	6
Not sure	*

*Less than 0.5%

Note: The percentages refer to respondents who have complained.

Person to whom the office worker complained.

Table II-11

Q.: To whom did you complain — a fellow worker, a supervisor, an office manager, an executive, an employee representative such as a union representative or ombudsman, or someone else?

Q.: As you know, employees may have complaints about some aspect of their office environment that they feel is uncomfortable. As far as you know, who do office workers generally turn to first with their complaints about physical discomfort — a fellow worker, a supervisor, an office manager, an executive, an employee representative such as a union representative or ombudsman, or someone else?

(Number of respondents)	Total Office Workers (673)	Total Executives (202)
	%	%
A supervisor	56	30
An office manager	29	14
A fellow worker	25	50
An executive	21	4
An employee representative	3	-
Other/someone else	1	1
Not sure	*	1

*Less than 0.5%

Note: The percentages refer [illegible] respondents who have complained

Office worker satisfaction with action taken on their complaints.

Table II-12

Q.: Were you very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied with the action taken on your complaint?

(Number of respondents)	Total Office Workers (697)
	%
Very satisfied	20
Somewhat satisfied	26
Somewhat dissatisfied	24
Very dissatisfied	26
Not sure	5

Note: The percentages refer to respondents who have complained

Frequency of comfort or discomfort as a topic of conversation.

Table II-13

Q.: How often would you say that comfort or discomfort in your office is a topic of conversation between you and your co-workers — very often, somewhat often, not very often, or never?

Q.: How often would you say that comfort or discomfort in the office is a topic of conversation among office employees in your company — very often, somewhat often, not very often, or never?

(Number of respondents)	Total Office Workers (1,004)	Total Executives (201)
	%	%
Very often	28	16
Somewhat often	29	40
Not very often	28	39
Never	15	4
Not sure	1	1

5. *Smoking:*

About one-third (35%) of the office workers smoke in their work area. Smoking seems to be somewhat more prevalent among persons 30 to 39 years of age (42%), government employees (40%), and those in banking and investments (44%). (See Table II-15.)

Approximately one-quarter (26%) of the nonsmoking employees state that when their co-workers smoke near them, it bothers them a great deal. Another 19% say it bothers them somewhat. Employees who are most bothered by smokers are professionals (31% say that smoking bothers them a great deal), and persons employed in the health and education industries (34%). (See Table II-16.)

A fairly high 22% of the office workers who smoke have received complaints about their smoking from their co-workers. Workers who have received complaints more often share an office with others (27%), are in a bullpen (pool) type of office (34%) or an open plan types of office (27%), are professionals (27%), clerical workers (27%), or regular workers (27%). (See Table II-17.)

According to 94% of the business executives, smoking is *not* limited in their companies to certain areas, such as lounges. (See Table II-18.)

Over half (51%) of the office workers and a smaller 36% of the executives feel that smoking *should* be limited to certain areas. (See Table II-19.)

Types of comfort and discomfort which are topics of conversation.

Table II-14

Q.: What would you say is the topic talked about most often when you discuss comfort or discomfort in the office with your co-workers?

Q.: What would you say is the topic talked about most often when employees discuss comfort or discomfort in the office?

(Number of respondents)	Total Office Workers (847)	Total Executives (189)
	%	%
Space		
Lack of filing space	1	1
Lack of space	11	12
Things are arranged poorly	2	1
All other space mentions	1	3
Temperature/Air Circulation		
Lack of windows	2	1
Poor air circulation	8	5
Either too hot or too cold	24	18
Insufficient heat	15	15
Insufficient cooling	2	13
General temperature remarks	24	40
All other temperature/air circulation mentions	6	9
People/Management		
Tension, differences between workers and boss, supervisor	3	1
All other people/management mentions	1	-
Physical Environment		
Co-workers make too much noise, chatter	7	6
Lack of privacy	3	6
Poor/inadequate/harsh lighting	2	4
Smoking in the office	2	1
All other physical environment mentions	4	4
Miscellaneous mentions	10	14
Do not know, no answer	-	1

Percentage of office workers who smoke at their desk or in their work area.

Table II-15

Q.: Do you ever smoke while working at your desk or in your work area, or not?

	(Number Of Respondents)	Do Smoke In Work Area	Do Not Smoke	Not Sure
		%	%	%
Total Office Workers	(1,002)	35	65	-
Age				
18-29 years	(308)	34	66	-
30-39 years	(281)	42	58	-
40 and over	(412)	32	68	-
Industry				
Manufacturing	(190)	38	62	-
Government	(147)	40	60	-
Health and education	(74)	27	73	-
Communications and public services	(94)	36	64	-
Business and professional services	(82)	33	67	-
Insurance and real estate	(108)	27	73	-
Banking and investments	(79)	44	56	-

Degree of discomfort when co-workers smoke.

Table II-16

Q.: Does it bother you a great deal, somewhat, hardly at all, or not at all when coworkers smoke near you?

	(Number Of Respondents)	A Great Deal	Some-what	Hardly At All	Not At All	Not Sure
		%	%	%	%	%
Total Office Workers	(1,001)	26	19	11	43	*
Job Type						
Executive, manager, supervisor	(23)	13	30	9	48	-
Professional	(161)	31	19	10	39	-
Secretarial	(89)	24	13	18	44	1
Clerical	(383)	26	20	13	40	-
Industry						
Manufacturing	(190)	29	19	9	45	2
Government	(147)	23	20	13	44	-
Health and education	(73)	34	15	12	38	-
Communication and public services	(94)	21	22	10	47	-
Business and professional services	(82)	28	26	13	33	-
Insurance and real estate	(108)	27	21	13	39	-
Banking and investments	(80)	21	14	14	51	-

Complaints by co-workers about smoking in the work area.

Table II-17

Q.: Have any of your co-workers ever complained about your smoking in your work area, or not?

	(Number Of Respondents)	Have Complained	Have Not Complained	Have Private Office	Not Sure
		%	%	%	%
Total Office Workers	(352)	22	72	2	3
Type Of Office					
Conventional	(154)	11	84	5	*
Bullpen	(165)	34	65		1
Open plan	(33)	27	61		6
Job Type					
Executive, manager					
Supervisor	(9)		63	38	
Professional	(139)	27	67	2	4
Secretarial	(29)	14	86		*
Clerical	(151)	27	68		5
Job Level					
Senior manager	(11)		85	15	
Manager	(67)	28	71	1	1
Supervisor	(39)	13	79	2	5
Regular worker	(183)	27	69	*	4
Office Occupancy					
Private	(124)	15	77	6	1
Shared	(226)	27	69	*	4

*Less than 1%

(NA - No response; (#) - Number of cases too small)

Whether or not smoking is limited to certain areas.

Table II-18

Q.: In your company, is smoking in offices limited to certain areas, such as lounges, away from where people work, or is smoking not limited in that way?

(Number of respondents)	Total Executives (203)
	%
Is limited	6
Is not limited	94
Not sure	*

Whether smoking should be limited to certain areas.

Table II-19

Q.: Do you feel that smoking in offices should be limited to certain areas, such as lounges, away from where people work, or don't you feel that smoking should be limited that way?

Q.: Do you feel smoking should be limited in such a way, or not?

(Number of respondents)	Total Office Workers (1,003)	Total Executives (203)
Feel smoking should be limited	51	36
Do not feel smoking should be limited	45	57
It depends (Volunteered)	*	6
Not sure	4	1

*Less than 1% (Number of executives)

Chapter III:

Energy Conservation, Office Temperatures, and Air Circulation.

A. Introduction

In the summer of 1979, a federal law was passed limiting the temperatures in public places (such as office buildings) to no lower than 78 degrees in the summer and no higher than 65 degrees in the winter.

Chapter III identifies attitudes toward air conditioning and central heat; compliance with office building temperature requirements; employee comfort with office temperatures; the perfect temperature for office workers; support for the energy conservation program relating to office temperatures; and air circulation in the office.

B. Background

In the 1978 study, about one-quarter of the office workers interviewed said that heat, air conditioning, and ventilation was one of the most important factors in helping them to get their job done well. Because of the importance of this factor to office workers — especially in light of the Carter Administration's energy conservation regulations — information was obtained in this new study on office worker comfort with the new temperature regulations. The concern for proper air ventilation identified in the 1978 study led to the development of additional questions in this 1980 study on whether offices were too drafty or too stuffy; on whether windows could be opened in the office; and on preferences for windows.

C. Energy Conservation, Office Temperature, and Air Circulation in the 1980's

1. Compliance with Building Temperature Regulations and Use of Appliances to Heat or Cool Offices:

Of the office workers interviewed in the 1980 study, 73% indicate that their employer has regulated office temperatures since the Administration's ruling; 17% say the temperature has *not* been regulated; and 11% are not sure. A larger 93% of the executives say their companies have regulated temperatures; 5% say they have not; and 2% are not sure.

Compliance with the law seems to vary according to industry: for example, 81% of the office workers in banking and investments report compliance, compared to 59% of those in health and education. However, it should be noted that this difference can be explained by the fact that hospitals are exempt from the temperature regulation law, as are elementary schools.

Thirty-seven percent of office workers say they have used electric fans or space heaters to help make the office temperature more comfortable. Fifty-eight percent of executives report that they have noticed employees using such supplementary appliances.

Compliance with non-residential building temperature regulation.

Table III-1

Q.: As you may know, one of the energy conservation measures that President Carter has taken is to limit the temperatures in public places such as office buildings to no lower than 78 degrees in summer and no higher than 65 degrees in winter. As far as you know, has your employer (your company) regulated the temperatures in your office to keep to this law, or not?

(Number of respondents)	Total Office Workers (1,002)	Total Executives (203)
	%	%
Has regulated temperatures	71	93
Has not regulated temperatures	17	5
Has in summer (Volunteered)	1	*
Has in winter (Volunteered)	1	*
Not sure	11	2

The use of supplementary appliances to heat or cool the office.

Table III-2

Q.: Since the new energy conservation measures, have you or your fellow co-workers (any employees) used electric fans, electric space heaters or other appliances to help make the temperature in your office more comfortable?

(Number of respondents)	Total Office Workers (724)	Total Executives (187)
	%	%
Have used supplementary appliances	37	58
Have not used supplementary appliances	62	41
Not sure	*	1

*Less than 0.5%

Note: The percentages refer to respondents who are in offices where the temperature is regulated.

2. Satisfaction with Temperature Regulation:

While many office workers are dissatisfied with their office temperatures, a 51% majority say that they are comfortable. Forty-five percent say they are somewhat or very uncomfortable with the temperatures of their office. Of the executives, 36% feel that office workers are somewhat or very uncomfortable with their office temperatures. More women than men are dissatisfied with office temperatures. 20% of women, compared to only 11% of men, say they are very uncomfortable with them.

A greater percentage of employees who work in offices where the temperatures have been regulated are uncomfortable with the office temperatures. Of the executives in such offices, 60% feel that most office workers are somewhat or very uncomfortable with the new regulations.

Forty-seven percent of the office workers say that during the summer of 1979, the office temperature was about right for them. However, 37% say it was too hot, and 13% say it was too cold.

Most (44%) of the office workers said that during the winter of 1979-80, the office temperature was about right for them. However, close to that number (39%) of the office workers said it was too cold and 14%, too hot.

In offices where temperatures have been regulated, a 63% majority of the workers say they now dress differently than they did before the new temperature regulations. A somewhat larger proportion of the executives (75%) estimate that office workers dress differently now than they did before.

Comfort with office temperature.

Table III-3

Q.: In general, do you (your employees) feel very comfortable, somewhat comfortable, somewhat uncomfortable, or very uncomfortable with the temperature of your office?

	Office Workers			
		Sex		
(Number of respondents)	Total (1,002)	Male (419)	Female (583)	Total Executives (201)
	%	%	%	%
Very comfortable	20	24	17	11
Somewhat comfortable	31	38	26	53
Somewhat uncomfortable	29	23	33	32
Very uncomfortable	16	11	20	4
It depends	4	4	4	*
Not sure	-	-	-	-

*Less than 0.5%

Comfort in offices where temperature is regulated.

Table III-4

Q.: Have you (your employees) been very comfortable, somewhat comfortable, somewhat uncomfortable, or very uncomfortable with the new temperature regulations in your office?

(Number of respondents)	Total Office Workers (724)	Total Executives (188)
	%	%
Very comfortable	7	3
Somewhat comfortable	27	34
Somewhat uncomfortable	41	46
Very uncomfortable	22	14
It depends (Volunteered)	2	2
Not sure	1	1

Note: The percentages refer to respondents who are in offices where the temperature is regulated.

Satisfaction with office temperature during the summer and winter of 1979.

Table III-5

Q.: Would you describe the temperature in your office this past summer as too hot, too cold, or about just right for you?

Q.: How about the temperature in your office this winter — has it been too hot, too cold, or about right for you?

	Total Office Workers	
(Number of respondents)	Summer (993)	Winter (986)
	%	%
Too hot	37	14
Too cold	13	39
About right	47	44
Not sure	3	3

Impact of office temperatures on the type of clothes worn by office workers.

Table III-6

Q.: Have you (your employees) dressed differently in the office than you did before the new temperature regulations?

(Number of respondents)	Total Office Workers (724)	Total Executives (188)
	%	%
Have dressed differently	63	75
Have not dressed differently	35	24
Not sure	1	1

3. The Perfect Office Temperature:

The perfect office temperature is a mean 70 degrees for office workers and 71 degrees for executives. Both agree that during the summer employees are most comfortable at a temperature no higher than 75 degrees. In winter, office workers are comfortable with temperatures no lower than 65 degrees, while business executives estimate a slightly higher 67 degrees as the lowest comfortable temperature for office workers.

There appears to be a consensus among office workers on the ***perfect*** mean temperature (69 to 71 degrees) and on the ***hottest*** permissible mean temperature during the summer (74 to 76 degrees). With regard to the ***coolest*** permissible mean temperature during the winter, however, there is more variation among the different groups, with cited temperatures ranging from 62 to 67 degrees.

Younger office workers tend to favor cooler temperatures in the winter than do older office workers.

Over half (57%) of the business executives feel that the current "78 degrees in summer, 65 degrees in winter" rule should be changed to a more comfortable temperature range, or that the regulations should be abolished, and 51% of the office workers agree.

The same percentage of business executives feel that "the energy conservation regulations as they now stand will adversely affect employee productivity."

A large 70% of executives feel that "the present regulations have had a positive effect on energy conservation in office buildings, however, over three-fourths (76%) feel that "really significant energy conservation in non-residential buildings will occur only when buildings are designed with energy savings in mind."

An almost unanimous 99% of the executives feel that "effective energy conservation measure for office buildings should consider not only temperature, but also such factors as humidity and the type of heating and air conditioning systems of a building."

Perfect, hottest, coolest office temperature choices.

Table III-7

Q.: If you (your employees) were given choices for the perfect, the hottest, and the coolest office temperatures, what would your (their) choices be?

	Total Office Workers			Total Executives		
(Number of respondents)	Perfect (1,003)	Hottest (1,003)	Coolest (1,003)	Perfect (203)	Hottest (203)	Coolest (203)
	%	%	%	%	%	%
59 degrees or less	-	-	4	-	-	*
60-61	1	-	9	-	-	2
62-63	*	*	7	-	-	3
64-65	5	1	29	1	-	27
66-67	4	*	11	2	-	17
68-69	26	3	24	25	3	35
70-71	36	12	11	37	8	12
72-73	19	19	3	25	19	4
74-75	5	30	1	9	27	-
76-77	1	10	*	1	20	-
78-79	1	10	*	*	16	-
80-81	1	9	*	-	6	-
82 degrees or more	-	5	-	-	1	-
Not sure	1	1	1	-	*	-
Mean (degrees)	70.3	74.9	64.6	70.8	75.2	66.9
Median (degrees)	70.8	75.0	66.0	71.2	75.6	68.0

*Less than 1 (%)

Agreement with energy conservation regulations on temperatures in non-residential buildings.

Table III-8

Q.: Do you personally feel that the 78 degree in summer, 65 degree in winter rule should be abolished, should be changed to a more comfortable temperature range, or should remain the way it is to conserve energy?

(Number of respondents)	Total Office Workers (1,004)	Total Executives (203)
	%	%
Should be abolished	12	12
Should be changed to a more comfortable temperature range	39	45
Should remain as is	45	40
Not sure	3	3

Agreement with statements about federal energy regulations for non-residential buildings.

Table III-9

Q.: I'd like to read you some statements about the federal energy regulations for non-residential buildings. For each, please tell me whether you tend to agree or disagree with that statement.

(Number of respondents)	Total Executives (203)
	%
The energy conservation regulations as they now stand will adversely affect employee productivity	57
The present regulations generally have had a positive effect on energy conservation in office buildings	70
Really significant energy conservation in non-residential buildings will occur only when buildings are designed with energy savings in mind	76
Effective energy conservation measures for office buildings should consider not only temperature, but also such factors as humidity and the type of heating and air conditioning systems of a building	98

4. Air Circulation in the Office

Office workers and executives were asked about the adequacy of air circulation in the office for employee comfort. About half (52%) of the office workers and twelve-sixteenths of the executives feel the air circulation is just about right for employees. About the same percentages of office workers and executives feel it is too drafty. However, 30% of the office workers feel it is too stuffy, whereas only 14% of the executives estimate that office workers feel it is too stuffy.

Almost two-thirds of the office workers report that they are not able to open their windows. A partially different 46% of the workers believe air circulation where windows can be opened is better than in offices where only the central heat and air conditioning systems circulate the air.

Executives may underestimate office workers' preferences for windows. Only 15% of the executives think that office workers prefer windows for air circulation, the majority (46%) think that office workers prefer central heat and air conditioning systems.

Comfort with air circulation in the office.

Table III-10

Q.: How about the circulation of air in your office — generally speaking, do you (your employees) feel there's too much air circulation so that it's drafty, too little so that it's stuffy, or is the air circulation in your office just about right?

(Number of respondents)	Total Office Workers (985)	Total Executives (201)
	%	%
Too drafty	14	13
Too stuffy	30	14
About right	53	66
Not sure	2	7

Ability to open windows for air circulation.

Table III-11

Q.: Can the windows in your office or on your floor be opened for air circulation?

(Number of respondents)	Total Office Workers (957)
	%
Can be opened	31
Cannot be opened	67
Not sure	2

Preference for windows versus central heating and cooling systems.

Table III-12

Q.: Do you (your employees) feel that, in general, air circulation in offices where the windows can be opened is better than in offices where only the central heating or air conditioning systems circulate the air, or do you (your employees) feel that central systems do the same job as windows, or do you (your employees) feel that central systems are better than windows for circulating the air?

(Number of respondents)	Total Office Workers (1,003)	Total Executives (203)
	%	%
Prefer windows	46	15
Prefer central heat and air conditioning systems	46	46
Don't have a preference; windows and central systems the same	12	11
Would like both	*	3
Not sure	5	1

* Less than one-half of one percent.

Chapter IV:

Lighting.

A. Introduction

This chapter specifically examines the quality of lighting for office workers, its availability, importance and its effect on productivity, the use of desk lights, preferences for overhead versus desk lighting, the perceived effects of lighting on vision, and company experience with the evaluation of lighting. It also relates earlier findings on attitudes regarding lighting, as reported in the 1978 study.

B. Background

In the 1978 study, information was obtained on the quality of lighting with respect to office workers personal workspace, the importance of lighting in getting the job done well, the availability of a task lighting system, and the effect of lighting on employee vision. "Lighting for the work you do" and "overall lighting" ranked fifth and eighth, respectively, among office workers in terms of their importance in helping to get their job done well.

Although half of the executives said in 1978 that task lighting was important for office workers to have, this item ranked seventeenth among factors of importance when recommending new office furniture systems. About three in 10 of the business executives thought task lighting had a strong advantage in the open plan design, another 48% felt that it was somewhat of an advantage.

Over half of the executive respondents indicated that the effect of office lighting on employee vision was very important. The effect of office lighting on employee vision ranked third regarding its current importance in office design, eighth as the most important in office design and planning in the next ten years, and a low twelfth as the most controversial issue 10 years from now.

C. Lighting in the 1980's

1. Quality of Lighting in Personal Workspace:

Office workers are generally satisfied with their lighting. 88% indicate that they are comfortable with their office lighting, and of this percentage, 66% indicate that they are ***very*** comfortable with it. Twelve percent say that they are uncomfortable with their office lighting.

The largest number of office workers indicate that good lighting, as opposed to other factors tested, affects their personal comfort on the job a great deal and is important to them. Executives share this viewpoint.

However, most office workers do not feel that better lighting helps them in improving their productivity. Among executives, better lighting (cited by 3 in 10) ranks as the seventh most important factor in helping to improve productivity.

Quality of lighting in personal workspace.

Table IV-1

Q.: Overall, do you feel very comfortable, somewhat comfortable, somewhat uncomfortable, or very uncomfortable working with the light you now have in your office?

(Number of respondents)	Total Office Workers (1,003)
	%
Very comfortable	66
Somewhat comfortable	22
Somewhat uncomfortable	10
Very uncomfortable	2

2. Office Worker Say in the Type of Lighting Used:

Only 32% of office workers now have at least some say in determining the type of lighting that's best for the work they do. A much higher 54% majority of the office workers feel it is very important for them, however, to have that say.

Of the executives, 39% feel that office workers have at least some say in determining the type of lighting that's best for the work they do and they rate lighting as being very important to those workers.

More office workers feel that it is very important for them to have a say in the type of lighting that's best for them than feel this way about any of the other seven items tested. More feel it is important to have a say in their lighting than to have a say in having a place to work without being distracted, in determining the most comfortable working temperature for their job and in determining the type of chairs they have, which are the next highest priorities.

3. Task (Desk) Versus Overhead Lighting:

Eighty-four percent of the office employees have overhead ceiling light, 1% have a light on their desk or working surface, and 14% have both. A high 92% of executives estimate that most office employees have overhead lights, 8% estimate they have both overhead lights and desk lights. Among the office workers who have a task light, 94% say that their employer provided the light.

Seven in ten office workers prefer an overhead light to a light on their desk. Only 10% prefer task lighting, while 18% prefer both. Sixty-eight percent of the executives think that most office workers prefer overhead lighting. Some executives overrate the desire of office workers for desk lights, with 20% thinking they prefer desk lighting. Eight percent feel that they prefer both.

Overhead lighting is preferred by 55% of the executives in terms of office worker comfort, and 32% feel task lighting is preferable. Over half (53%) feel that overhead lighting is best for office worker productivity, while 27% say task lighting is preferable.

Type of lights used by office workers.

Table IV-2

Q.: Do you (your employees) have overhead ceiling lights about the desk or work area, or do you (your employees) have a light on the desk or working surface, or both?

(Number of respondents)	Total Office Workers (1,002)	Total Executives (203)
	%	%
Have overhead ceiling light, work with overhead light	84	92
Have light on desk or working surface, work with light at their desk	1	-
Both	14	8
Not sure	*	

Type of lights used by office workers; demographic data.

Table IV-2a

Q.: Now let's talk about lighting in your office — that is, the lighting in your workspace. Do you have overhead ceiling lights above your desk or work area, or do you have a light on your desk or working surface, or both?

	(Number Of Respondents)	Have Overhead Ceiling Light	Have Light On Desk Or Working Surface	Both	Not Sure
		%	%	%	%
Total Office Workers	**(1,002)**	**84**	**1**	**14**	*
Region					
East	(288)	78	1	20	-
Midwest	(302)	87	1	11	-
South	(235)	87	1	11	-
West	(177)	85	1	14	1
Office Occupancy					
Private	(339)	79	1	20	-
Shared	(660)	87	1	12	*
Industry					
Manufacturing	(190)	83	2	14	1
Government	(147)	89	-	10	1
Health and education	(74)	76	-	24	-
Communications and public services	(94)	84	2	14	-
Business and professional services	(81)	75	1	23	-
Insurance and real estate	(108)	90	1	9	-
Banking and investments	(79)	89	-	11	-
Job Type					
Executive, manager, supervisor	(23)	74	-	26	-
Professional	(161)	75	2	23	-
Secretarial	(89)	82	2	16	-
Clerical	(383)	87	1	12	1
Job Level					
Senior management	(54)	74	-	26	-
Manager	(205)	84	2	13	-
Supervisor	(172)	86	1	13	-
Regular worker	(562)	85	1	14	1

*Less than 0.5%

Source of desk lights for office workers.

Table IV-3

Q.: Did your employer provide you with a light on your desk or work surface, or did you choose to bring one in to the office yourself?

(Number of respondents)	Total Office Workers (155)
	%
Employer provided	94
Brought own in	6

Note: The percentages refer to respondents who have a light on their desk or work surface.

Office worker preference for overhead versus desk lighting.

Table IV-4

Q.: In general, would you (your employees) prefer to work with an overhead light or a light on your desk?

(Number of respondents)	Total Office Workers (1,003)	Total Executives (203)
	%	%
Prefer overhead light	70	68
Prefer light on desk	10	20
Both (Volunteered)	18	8
Not sure	2	4

Preference of executives for task versus overhead lighting for office worker's comfort and productivity.

Table IV-5

Q.: Do you feel that task lighting or overhead lighting is preferable for office employees in terms of their comfort while working?

Q.: Do you feel task or overhead lighting would be preferable in terms of office workers' productivity?

	Total Executives	
(Number of respondents)	Comfort (203)	Productivity (203)
	%	%
Task lighting	32	27
Overhead lighting	55	53
Neither/no preference	9	15
Not sure	4	5

4. Effects of Lighting on Vision:

Ninety-two percent of the office workers say that the lights by which they usually work are fluorescent and 5% say they are incandescent. While 81% feel their office lights are just about right, 7% feel they are too bright and 11% feel they are too dim. However, 26% say that the lighting they presently have contributes somewhat or a great deal to eyestrain on the job.

Eyestrain is more prevalent among persons 18 to 29 years of age, women, persons who work in bullpen (pool) types of offices, persons who work in open plan types of offices, and regular workers.

Over half (55%) of the executives say that their companies have evaluated their lighting for office workers in terms of its effect on their comfort and productivity.

Office workers use of fluorescent versus incandescent bulb lights.

Table IV-6

Q.: Are the lights by which you usually work in the office fluorescent lights, or regular incandescent bulb lights?

(Number of respondents)	Total Office Workers (989)
	%
Fluorescent	92
Incandescent bulbs	5
Not sure	3

Office worker comfort with density of light in their office.

Table IV-7

Q.: Would you describe the light by which you usually work in the office as too bright, too dim, or just about right for the kind of work you do?

(Number of respondents)	Total Office Workers (1,003)
	%
Too bright	7
Too dim	11
Just about right	81
Not sure	1

Evaluations of lighting.

Table IV-8

Q.: Has your company ever evaluated its lighting for office workers in terms of its effect on their comfort or productivity?

(Number of respondents)	Total Executives (203)
	%
Has evaluated	55
Has not evaluated	41
Not sure	4

Lighting used by office workers and eyestrain.

Table IV-8a

Q.: Do you feel that the lighting you now have contributes to eyestrain for you on the job a great deal, somewhat, hardly at all, or not at all?

	(Number Of Respondents)	A Great Deal	Some-what	Hardly At All	Not At All	Not Sure
		%	%	%	%	%
Total Office Workers	**(1,004)**	**7**	**19**	**17**	**56**	*
Age						
18-29 years	(310)	10	24	19	46	1
30-39 years	(281)	7	19	16	57	1
40 and over	(412)	5	15	17	62	-
Sex						
Male	(421)	5	15	17	63	-
Female	(583)	9	22	18	51	1
Type of Office						
Conventional	(289)	4	18	15	63	*
Bullpen	(198)	10	20	21	49	1
Open plan	(366)	9	22	16	53	1
Job Type						
Executive, manager, supervisor	(23)	-	9	9	83	-
Professional	(162)	7	15	17	62	-
Secretarial	(89)	4	17	21	57	-
Clerical	(384)	10	24	18	47	1
Job Level						
Senior manager	(54)	-	6	15	80	-
Manager	(206)	4	15	17	65	-
Supervisor	(172)	8	17	11	64	-
Regular worker	(563)	9	22	20	48	1

*Less than 0.5%

Chapter V:

Office Chairs.

A. Introduction

In Chapter II, a comparison of office chairs with other factors in an office indicates that a comfortable chair is perceived as being available to most employees, affects their comfort a great deal, and is very important to them.

Office workers were asked if a majority of their co-workers have comfortable conditions: the opportunity to stretch and move around during the day is most prevalent, while a comfortable chair and good lighting rank second, machines and reference materials within easy reach ranks third, and enough space to move at their desks ranks fourth.

A comfortable chair is also ranked second as a factor which affects office workers' comfort on the job a great deal, and as a very important factor for them to have.

Since many office workers spend a great deal of time seated, the comfort of the chair is important. Therefore, a number of statistics unveiled in the earlier 1978 study bear repeating in the background material that follows.

B. Background

Value of office furniture. Half of the office workers in the 1978 study felt it was very true that "my work surface, chair, storage space, and other furniture are what I need to get the job done well." Moreover, "ability to adjust work surface, chair, and storage space to suit work requirements" was identified by 15% of the office workers as being one of the most important factors in helping them to get their job done well and ranked sixth out of 17 characteristics. "Comfort of your chair" was identified by 11% of the office workers and ranked ninth, and "back support of your chair" was identified by 4% of the office workers and ranked fifteenth.

Rating of personal workspace. Office workers were asked to rate their personal workspaces. "Comfort of your chair" and "back support of your chair" ranked sixth and eighth of 17, respectively, and "ability to adjust your work surface, chair, and storage space to suit your work requirements" ranked eleventh.

When executives were asked which characteristics they felt most office employees would single out as most important in helping them do a good job, "ability to adjust work surface, chair, and storage space to suit work requirements" ranked third, "comfort of chair" ranked twelfth, and "back support of chair" ranked sixteenth.

In addition, 31% felt "ability to adjust work surface, chair, and storage space to suit your work requirements" was important in helping office employees to get their job done well, 8% said "comfort of chair" was important, and 3% said "back support of chair" was important.

What office workers would fight for. Office workers were asked: "If the management of your company or organization were opposed to it, how much do you feel you personally would fight for better work surfaces, chairs, storage space, and other furniture for your job? Almost three-quarters (73%) said they would fight very or somewhat hard.

Office changes and productivity. Office workers and executives were asked about various changes in the workplace and what impact they would have on office worker productivity. A substantial proportion of both executives (87%) and office workers (62%) felt that studying exactly what people do and then making sure their work surfaces, chairs, lighting, and storage space are what they need to do their jobs, would make office workers more productive. This change ranked fourth among both groups.

Style. Office workers and executives were asked what characteristics were most important to office workers when they thought of the way their personal workspaces looked. "Style of desks, tables, and chairs" and "materials used for desks, tables, and chairs" both ranked fifth among office workers, and fourth and eighth, respectively, among executives.

Office equipment selection. In 1978, office workers were asked what they would like to change in their workspace if they had a lot of say in planning a new office space or selecting new office equipment. "Chairs: newer/modern style, swivel, more comfortable, etc." was identified by 10% of the office workers and ranked seventh as the most mentioned item.

Status. Office workers and executives were asked to identify two or three characteristics which they thought most office employees would feel usually make the working areas of executive offices different. "Style of desks, tables, and chairs" ranked first among office workers and second among executives, and "materials used for desks, tables, and chairs" ranked fifth among office workers and fourth among executives.

Office plans in the next ten years. In 1978, business executives were asked what factors would gain in importance for developing office plans in the next ten years. "Suitability of office furniture for job requirements" was identified by 5% of the executives and ranked as the fourteenth most important factor.

Likelihood of changes in the workspace. Business executives were asked if their company had implemented various policies or whether they were likely to implement such policies in the next ten years. Sixty-two percent of the executives said their company had implemented a policy to "study exactly what people do on the job and then make sure that their working surfaces, chairs, lighting, and storage space are what they need to do their jobs"; 70% said it was likely to be implemented in the next ten years. This policy ranked sixth under the category "company has implemented" and fifth under "company is likely to implement in the next ten years."

Issues in office design. Business executives were asked about the importance of various issues in office design. "Prevalence of backstrain among office employees" was not considered to be a very important issue in office design in 1978.

C. Office Chairs in the 1980's

1. Present Office Chair: Importance. When office workers and executives are asked about the importance of office chairs to employees, out of the context of other factors, 62% of the office workers and 72% of the executives say that the office chair is very important. Over three-fourths (78%) of the executives feel their own chair is very important.

Over two-thirds of the employees 40 years of age and over feel their office chair is very important to them, as do 69% of the women employees, 70% of the office workers who spend 75% or more of their day sitting at their desk, a high 82% of secretaries, 69% of the employees in the health and education industries, and 70% of those in the communications and public services industries.

Executives, unlike office workers themselves, seem to feel that the office chair is very important in showing the status of an office worker; 78% of the executives (compared to only 17% of office workers) believe this is so.

Fifty-two percent of the business executives volunteer that if office workers were given the opportunity to personally select one piece of their office furniture, they would select a chair, and 47% say they would select a desk. But they feel if executives themselves were given the same choice, 35% would select a chair and 62% say they would select a desk.

Importance of office chairs.

Table V-1

Q.: How important is your (your employees') office chair to you — very important, somewhat important, hardly important, or not at all important?

Q.: How important do you (your employees) feel an office chair is in showing the status of an office worker — very important, somewhat important, hardly important, or not at all important?

Q.: In general are office chairs very important, somewhat important, hardly important, or not at all important to executives?

	Total Office Workers (1,003)		Total Executives (203)		
(Number of respondents)	Importance To Office Workers	Importance In Showing Status Of Office Workers	Importance To Office Workers	Importance To Executives	Importance In Showing Status Of Office Workers
	%	%	%	%	%
Very important	62	17	72	78	78
Somewhat important	30	27	26	20	20
Hardly important	6	23	2	2	2
Not at all important	2	32	-	-	-
Not sure	-	1	-	-	-

Importance of office chairs; demographic data.

Table V-1a

Q.: How important is your office chair to you — very important, somewhat important, hardly important, or not at all important?

	(Number Of Respondents)	Very Important	Somewhat Important	Hardly Important	Not At All Important	Not Sure
		%	%	%	%	%
Total Office Workers	(1,003)	62	30	6	2	*
Age						
18-29 years	(309)	56	37	5	1	*
30-39 years	(281)	62	27	7	3	-
40 and over	(412)	67	26	5	2	*
Sex						
Male	(421)	54	36	8	2	-
Female	(582)	69	25	4	2	*
Time Spent Sitting at Desk						
0-50%	(187)	42	42	12	4	-
51-75%	(285)	61	31	6	2	*
76% and over	(529)	70	25	3	1	*
Industry						
Manufacturing	(190)	62	29	6	2	-
Government	(147)	64	27	5	4	-
Health and education	(74)	69	23	7	1	-
Communications and public services	(94)	70	21	6	2	-
Business and professional services	(82)	56	32	9	2	1
Insurance and real estate	(108)	61	29	6	4	-
Banking and investments	(80)	63	34	3	-	1
Job Type						
Executive, manager, supervisor	(23)	65	30	4	-	-
Professional	(162)	57	33	6	4	-
Secretarial	(89)	82	13	4	-	-
Clerical	(383)	64	30	4	2	*

*Less than 0.5%

Most important piece of office furniture.

Table V-2

Q.: If a regular office worker were allowed to personally select only one piece of his or her office furniture, what one piece do you think they would select?

Q.: What one piece of office furniture do you think executives would select?

	Executives	
(Number of respondents)	Office Workers Who Would Select A Piece Of Furniture (201)	Executives Who Would Select A Piece Of Furniture (201)
	%	%
Chair	52	35
Desk	47	62
Picture	1	-
Couch/sofa	-	2
All other mentions	*	1

*Less than 0.5%

Satisfaction. Nearly three-fourths (73%) of the office workers are satisfied with their present chair. However, 26% say they would prefer some other kind of chair, if they were given the choice. Office workers who are particularly anxious to have another kind of chair are employees 18 to 29 years of age (34%), employees in a bullpen (pool) type of office (31%), persons at the supervisory job level (31%), and persons employed in the government (31%).

Office worker satisfaction with their office chair.

Table V-3

Q.: If you were given a choice, would you say that you're satisfied with the chair you now have, or would you prefer some other kind of chair?

	(Number Of Respondents)	Satisfied With Present Chair	Would Prefer Some Other Kind of Chair	Not Sure
		%	%	%
Total Office Workers	**(1,003)**	**73**	**26**	**1**
Age				
18-29 years	(309)	64	34	1
30-39 years	(281)	70	29	*
40 and over	(412)	81	18	*
Type of Office				
Conventional	(289)	75	25	*
Bullpen	(197)	69	31	-
Open plan	(366)	73	27	1
Job Type				
Executive, manager, supervisor	(23)	83	17	-
Professional	(162)	73	26	1
Secretarial	(89)	73	26	1
Clerical	(383)	69	30	1
Job Level				
Senior manager	(54)	89	11	-
Manager	(206)	80	20	*
Supervisor	(172)	69	31	-
Regular worker	(562)	70	29	1
Industry				
Manufacturing	(190)	77	23	-
Government	(147)	69	31	1
Health and education	(74)	74	23	3
Communications and public services	(94)	77	23	-
Business and professional services	(82)	67	32	1
Insurance and real estate	(108)	70	29	1
Banking and investments	(79)	73	25	1

*Less than 0.5%

Type of Chair Used and Preferred. A card with drawings of five types of chairs was shown to both office workers and executives, and they were asked which type most closely resembles the office chair they have now. More than one-third (35%) of the office workers identify secretarial type chairs as most closely resembling their own, another 35% pick managerial chairs, 14% choose executive chairs, and 12% identify general office chairs. In looking at the same drawings and asked their preferences, office workers most often chose the executive chair, followed by managerial, secretarial and general office chairs.

Types of chairs currently being used by office workers.

Table V-4

Q.: Here are some drawings of different types of office chairs. Which chair looks most like the chair you now have?

(Number of respondents)	Total Office Workers (989)
	%
Secretarial	35
Manager	35
Executive	14
General office	12
Side chair	4

Type of chair preferred by office workers.

Table V-4a

Q.: If you had to choose *one* of these chairs for your office or workspace, which *one* would you choose? (PROBE IF HESITANT)

(Number of respondents)	Total Office Workers (1,000)
	%
Executive	37
Managerial	28
Secretarial	18
General office	11
Side chair	1
None	3
Not sure	1

Types of Office Chairs

Secretarial

Side Chair

General Office

Manager

Executive

Chairs and Job Function. Chairs are perceived to vary more often by job level than by job function.

Over six in 10 (61%) of office workers say their chair is very different from the chair of the president or head of the organization, although a much smaller 27% say their chair is very different from that of their boss or supervisor.

A relatively low 43% say their chair is very (14%) or somewhat (29%) different from the chairs of other workers in their office who perform ***different*** jobs than they do. Conversely, then, it appears that the same type of chair is used by workers doing different types of jobs. Not surprisingly, only 5% of the office workers say their chair is different from chairs of other workers who do the same job as they do.

Comparison of chair and job function.

Table V-5

Q.: How different is your chair from (ITEM) — very different, somewhat different, not very different, or not at all different?

(Number of respondents: 1,003)	Total Office Workers				
	Very Different	Somewhat Different	Not Very Different	Not At All Different	Not Sure
	%	%	%	%	%
The chair of the president or head of your organization	61	15	4	6	14
Your boss's or supervisor's chair	27	31	12	28	1
The chairs of other workers in your office who perform different jobs than you do	14	29	17	39	1
The chairs of other workers in your office who do the same job as you do	5	14	18	62	1

Comparison with favorite chair at home. Thirty-nine percent of office workers say their office chair is more important than their favorite chair at home. Another 39% say it is about the same in importance and 15% say it is less important.

Segments of office workers who particularly feel that their office chair is more important than their favorite chair at home are employees who spend 75% or more of their day sitting at their desk, secretaries, employees at a senior management job level, and persons employed in the communications and public services industries.

In terms of the way an office chair should differ from a chair used frequently at home, office workers volunteer that their chair at the office should have "good back support" (42%), have "wheels and be mobile" (31%), be "comfortable and designed to fit the job and person" (23%), and be "straight and erect and have an upright back" (21%).

Comparison of the importance of an office worker's chair used at home versus that used in the office.

Table V-6

Q.: Many people have a favorite chair at home that they frequently use for reading or watching television or working at home. Would you say that your office chair is more important, less important, or about the same in importance to you as a favorite chair at home?

	(Number Of Respondents)	More Important	Less Important	About The Same	Don't Have Favorite Chair At Home (Vol.)	Not Sure
		%	%	%	%	%
Total Office Workers	**(1,002)**	**39**	**15**	**39**	**6**	**1**
Time Spent Sitting at Desk						
0—50%	(187)	25	28	35	10	2
51-75%	(284)	38	16	40	5	2
76% and over	(529)	45	11	39	5	1
Job Type						
Executive, manager, supervisor	(23)	43	9	35	13	-
Professional	(161)	39	17	37	7	1
Secretarial	(88)	56	6	35	3	-
Clerical	(384)	38	16	39	6	2
Job Level						
Senior manager	(54)	44	20	26	9	-
Manager	(205)	42	15	37	4	1
Supervisor	(172)	38	13	44	5	1
Regular worker	(562)	38	16	39	6	1
Industry						
Manufacturing	(189)	41	11	39	7	2
Government	(147)	33	21	41	5	1
Health and education	(74)	42	12	43	1	1
Communications and public services	(93)	47	12	37	4	-
Business and professional services	(82)	41	20	34	2	2
Insurance and real estate	(108)	38	21	34	6	1
Banking and investments	(80)	40	18	35	6	1

Office worker's perception of how the chair used at the office should differ from that used at home.

Table V-7

Q.: In what ways do you feel that an office chair should be different from a chair you frequently use at home?

(Number of respondents)	Total Office Workers (1,003)
	%
Good back support	42
Wheels/mobile	31
Comfortable/designed to fit the job or person	23
Straight/erect, upright back	21
Not as comfortable/business-like	16
Swivel	12
Firm seat/cushions	11
Adjustable seat to floor/raise or lower/reach desk	7
Good height/high back	6
Adjustable back/reclining	6
Cushioned/softer seat	6
Arm rests	5
Mechanically ground/sturdier	4
Adjustable	3
More efficient/smaller	2
No arm rests	2
Different upholstery	1
None/no difference	2
All other mentions	6
Do not know/no answer	2

2. Chair Design and Function:

Over half (58%) of the office workers feel their office chair is very well designed for their job. Another 31% believe it is designed somewhat well, but 11% say it is not well designed.

Executives (most of whom have some responsibility for the purchase of chairs) are more critical than office workers about how well office chairs are designed for the job they have to accomplish. For example, 38% of the executives feel office chairs are very well designed, 48% feel they are only somewhat well designed, and 14% feel they are not well designed.

Quality of chair design for office workers.

Table V-8

Q.: How well was your chair designed for someone in your job — very well, somewhat well, not very well, not at all well?

Q.: In general, how well do you think most office chairs are tailored or designed for the job they have to accomplish — very well, somewhat well, not very well, or not at all well?

(Number of respondents)	Total Office Workers (1,003)	Total Executives (203)
	%	%
Very well	58	38
Somewhat well	31	48
Not very well	7	12
Not at all well	4	2
Not sure	1	-

Quality of chair design for the office worker; demographic data.

Table V-8a

Q.: How well was your chair designed for someone in your job — very well, somewhat well, not very well, or not at all well?

	(Number Of Respondents)	Very Well	Somewhat Well	Not Very Well	Not At All Well	Not Sure
		%	%	%	%	%
Total Office Workers	**(1,003)**	**58**	**31**	**7**	**4**	**1**
Age						
18-29 years	(309)	50	34	11	5	1
30-39 years	(281)	55	33	6	5	1
40 and over	(412)	65	27	5	2	1
Types of Office						
Conventional	(288)	63	28	6	2	2
Bullpen	(198)	52	32	10	6	1
Open plan	(366)	56	33	7	3	*
Job Type						
Executive, manager supervisor	(23)	78	22	-	-	-
Professional	(162)	56	29	10	4	2
Secretarial	(89)	66	28	6	-	-
Clerical	(383)	54	32	8	5	1
Job Level						
Senior manager	(54)	74	20	2	2	2
Manager	(206)	63	28	5	2	2
Supervisor	(172)	54	34	8	3	-
Regular worker	(562)	55	32	8	4	1
Industry						
Manufacturing	(190)	59	32	5	2	-
Government	(147)	54	30	12	3	-
Health and education	(74)	50	41	4	4	1
Communications and public services	(94)	71	18	3	7	-
Business and professional services	(82)	57	29	12	1	-
Insurance and real estate	(108)	56	32	6	4	2
Banking and investments	(80)	53	36	5	5	-

*Less than 0.5%

3. Features Which Contribute to Comfort and Productivity:

Those characteristics of chairs which over 75% of office workers feel are *very* important are: a seat height which is correct for desk and work (90%), overall comfort (89%), good support to the lower back (86%), wheels for moving around easily (83%), the ability to turn or swivel on its base (79%), and an adjustable seat height (78%).

Viewed by fewer office workers as very important are: being balanced so that you can lean forward and backward with ease (67%), a back height which can be adjusted (57%), arm rests (41%), a back which can be adjusted to be stiff or to give way when you lean back (36%), and a tilt of the chair which can be adjusted to stay straight or lean back at different angles (33%). In general, office workers are most willing to spend more money for those chair features they consider most important: good lower back support (executives agreed: it was their overwhelming first choice for improving employee productivity), wheels for mobility, overall comfort, and a swivel on the base.

Among office workers, the ability to adjust the back height ranks as the ninth most important feature for which they would be willing to spend more money, whereas among executives, it ranks fifth. Among office workers, having arm rests ranks as the seventh most important feature of a chair for which they would be willing to spend more money, whereas it ranks eleventh among executives.

Features of office chairs which contribute to office worker comfort and productivity.

Table V-9

Q.: (ITEM) Does your office chair have that characteristic, or not?
Q.: How important do you feel that characteristic is or would be for you to have — very important, somewhat important, hardly important, or not important at all?
Q.: If you were to spend money on an office chair, which two or three features would you personally be willing to spend more money for?
Q.: What would you say are the two or three most important features of an office chair that help you do your job well?
Q.: Which 2 or 3 items do you think would help to contribute most to *improved comfort* for office workers?
Q.: Which 2 or 3 features do you feel might best help *increase the productivity* of the office worker?
Q.: Finally, as a corporate decisionmaker, which 2 or 3 items would be most important in influencing your decision to buy such a chair for the office — in other words, which 2 or 3 items would you be willing to spend money for?

	Office Workers														Executives					
(Number of respondents)	Has (1,001)		Does Not Have (1,001)	Not Sure (1,001)	Very Important (1,000)		Somewhat Important (1,000)	Hardly Important (1,000)	Not Important At All (1,000)	Not Sure (1,000)	Would Be Willing To Spend More Money For (1,002)		Most Important Features (1,002)		Would Improve Office Worker Comfort (203)		Increase Worker Productivity (202)		Would Be Willing To Spend More Money For (203)	
	Rank	%	%	%	Rank	%	%	%	%	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
It gives good support to the lower back	8	77	22	1	3	86	10	2	2	*	1	72	1	66	1	77	1	58	1	59
It is balanced so that you can lean forward and backward with ease	6	82	18	1	7	67	25	5	3	*	8	15	7	12	8	13	7	16	8	13
It has wheels for moving around easily	1	94	6	*	4	83	13	2	2	-	2	52	2	53	2	38	2	42	4	33
It turns or swivels on its base	2	93	6	*	5	79	16	3	2	-	4	33	4	34	6	19	5	24	6	20
The seat height is correct for your desk and your work	3	92	8	1	1	90	9	1	*	-	5	27	5	30	3	37	3	38	7	19
The seat height can be adjusted	5	83	14	4	6	78	16	3	3	*	6	25	6	20	5	30	6	23	3	39
The back height can be adjusted	11	48	46	5	8	57	20	10	11	1	9	12	9	9	7	15	8	9	5	21
It has arm rests	10	50	50	-	9	41	24	11	24	*	7	18	8	10	11	6	12	4	11	5
It's covered in a nice fabric or material	7	78	20	1	12	28	40	19	13	*	11	8	12	4	12	6	13	4	10	11
It's in a color you/they like	9	62	34	4	14	12	31	31	27	*	14	4	14	1	14	1	14	2	14	3
The tilt of the chair can be adjusted to stay straight or lean back at different angles	13	46	49	5	11	33	29	17	20	1	12	7	11	6	10	7	10	9	12	5

The seat of the chair can be adjusted so you can sit forward or farther back	14	24	69	7	13	24	22	22	30	3	13	5	13	4	13	6	11	6	13	5
The back of the chair can be adjusted to be stiff or to give way when you lean back	12	47	48	4	10	36	30	14	18	1	10	10	10	8	9	11	9	9	9	12
Overall, it's comfortable	4	87	13	1	2	89	10	1	*	-	3	35	3	37	4	36	4	34	2	39
None (Volunteered)												1		1		-		1		1
Not sure												-		*		1		1		2

*Less than 0.5%

4. Features, Other Than Price, Influencing Chair Purchase:

Additional characteristics which influence executives in their decisions to purchase chairs are the durability and construction of the chair (24%), and the appearance, look, and design of the chair (15%).

Features other than price that influence executives' decision to purchase a chair.

Table V-10

Q.: Are there any additional features, other than *price*, that might influence your decision to purchase such a chair?

(Number of respondents)	Total Executives (203)
	%
Durability of chair, well constructed	24
Appearance, looks, design	15
Quality chair	9
Comfort	9
Availability in the future, how long it will be in stock, delivery manufacturer	8
Can be obtained promptly/quick	7
Fabric, prefer a fabric seat	6
How chair might fit into decor	6
Durability of fabric	6
Service, availability of replacement parts	5
Easily repairable	5
Color	4
Reputation of manufacturer	3
Adjustability	3
Safety features, fire retardancy	3
Appearance, looks of fabric	2
Back support	2
If chair is designed for the job/might relate to better productivity	1
None	27
All other mentions	16
Do not know/no answer	1

5. Backstrain:

As indicated earlier, office workers and executives say that having a chair with good support to the lower back is very important for employees. However, almost one-fourth (22%) of the office workers say they do not have a chair which gives them good support to the lower back. Over half (56%) of the office workers say they have experienced problems with their backs. And, over half (51%) of the executives say they have received complaints from employees about backstrain or tired back.

Nevertheless, off-the-job factors are identified as the cause of employee back problems by 40% of the office workers and 53% of the executives. Thirty-six percent of the office workers and 12% of the executives identify the cause of back problems as stress or strain at work. An uncomfortable chair is cited by a smaller 28% of the office workers and 33% of the executives as the cause of employee backstrain.

Office worker experience with backstrain or a tired back.

Table V-11

Q.: Have you ever experienced problems with backstrain or a tired back?

(Number of respondents)	Total Office Workers (999)
	%
Have experienced problems with back	56
Have not	44

Executive experience with employee complaints about backstrain or tired back.

Table V-12

Q.: Does your company ever receive complaints from employees about problems with backstrain or a tired back?

(Number of respondents)	Total Executives (202)
	%
Have gotten complaints	51
Have not	41
Not sure	8

Cause of office workers' problems with their backs.

Table V-13

Q.: Would you say that your (your employees') problems were caused by stress at work, an uncomfortable office chair, some other strain at work, or something you did off the job?

(Number of respondents)	Total Office Workers (559)	Total Executives (104)
	%	%
Something off the job	40	53
Uncomfortable office chair	28	33
Stress at work	24	6
Other strain at work	12	6
Other	5	3
All (Volunteered)	2	3
None (Volunteered)	1	-
Not sure	1	9

Note: The percentages refer to office workers who have experienced problems with their backs, and executives who have received complaints.

6. Why Workers Would Select Particular Chairs:

Some of the primary reasons why office workers would select one type of chair over another is because it looks comfortable (43%), has arm rests (27%), has a firm back and would give good back support (17%), has good, large, or well-padded cushions (11%), is functional (11%), is mobile (11%), and has wheels (10%).

Reasons why office workers would select a particular chair.

Table V-14

Q.: Why would you select a particular chair?

(Number of respondents)	Total Office Workers (959)
	%
Design	**46**
Comfortable	43
Good cushions, large cushions, well-padded	11
Functional, suits my purposes, meets my needs	11
Like the one I use	8
Design attractive, grand, status	8
Good support in general, firm in general	7
Softer	3
Bigger, easy to get in and out of	3
Small enough not to get in the way, unobtrusive	3
The best chair, it's good/nice	3
Looks simpler, not heavy	1
Mobility/Arm Rests	**28**
Like arm rests, arm support	27
Freedom of movement, mobility, moves easily	11
Wheels	10
Dislike arms	8
Swivel	7
Back Support/Comfort	**16**
Firm back, back support	17
High back, back rests, long back	8
Wide back, full back	5
Fits my back, my body	3
Back looks comfortable	2
Adjustability	**7**
Adjusts easily, flexible	5
Can recline, leans back	5
Height is adjustable	4
Back is adjustable	4
All other mentions	6
Do not know/no other answer	*

*Less than 0.5%

7. Benefits From Office Workers' Choice of Their Chair:

Office workers say that if they were given a choice in choosing their office chairs, they feel they would benefit in terms of being more comfortable (32%), and feeling more like working and being more productive (26%). About one-fifth (21%) of the office workers, however, feel that having a say in choosing their chair would make no difference in their job performance.

Office workers who especially feel that it would increase their productivity or make them feel more like working are secretaries (33%), and persons with clerical jobs (31%).

Benefits from office workers choice of their chairs.

Table V-15

Q.: What benefits do you feel would come about if office workers like yourself were given a say in choosing their office chairs?

		Job Type			
(Number of respondents)	Total (998)	Executive, Manager, Supervisor (23)	Professional (162)	Secretarial (89)	Clerical (382)
	%	%	%	%	%
Would be more comfortable	32	30	30	42	32
Would increase productivity, would feel more like working	26	22	18	33	31
Makes no difference	21	13	26	11	17
Chair more suited to body size, physique, individual	12	13	12	11	13
Would help achieve satisfaction on job, create sense of importance or belonging, personal satisfaction	8	4	8	6	7
Would create less back problems, less back pains	6	9	7	9	8
Would help morale, create better employee attitude	6	4	7	6	5
Would create happier employees	6	9	7	15	5
Employees would feel they have more of a say	5	17	4	2	4
Might cause trouble, create problems	4	13	5	4	4
Already have a choice	4	17	3	7	4
We already have the comfortable furniture that we want	4	4	4	4	6
Employees would have less complaints	4	9	3	4	5
Would create less fatigue	3	-	2	2	5
Employees would feel company is concerned about them	2	4	3	1	2
Employee would feel more autonomous, independent	2	4	2	2	2
Employees would be more relaxed	1	-	1	2	1
Can move around better and/or faster	1	-	1	1	2
Would be a waste of company money	1	-	1	1	-
If too comfortable may cause less productivity	1	-	-	-	1
All other mentions	7	17	9	8	5
Do not know/no other answer	2	-	1	1	3

8. Value of Office Chairs:

When asked whether having a better chair would increase office worker productivity in a day or improve the quality of their work, executives appear to be more optimistic than office workers.

While 35% of the office workers feel that a better chair would help them to ***do more work*** in a day, 71% of the executives feel this is true.

Over one-fourth (26%) of the office workers feel that a better chair would help them to ***improve the quality*** of their work, while 38% of the business executives feel that improved chairs would lead to an improvement in the quality of office work.

Value of a better chair in helping office workers to do more in a day.

Table V-16

Q.: Do you feel that a better chair would help you (your employees) do a great deal more work, somewhat more work, or no more work in a day than you do now?

(Number of respondents)	Total Office Workers (992)	Total Executives (202)
	%	%
Great deal more	8	11
Somewhat more	27	60
No more	62	28
Not sure	2	1

Value of chair in helping office workers to do more in a day; demographic data.

Table V-17

Q.: Do you feel that a better chair would help you do a great deal more work, somewhat more work, or no more work in a day than you do now?

(Number of respondents)	Total (992)	Age			Sex		Type Of Office			Job Type				Job Level			
		18-29 Years (306)	30-39 Years (276)	40 And Over (409)	Male (417)	Female (575)	Conventional (287)	Bullpen (194)	Open Plan (361)	Executive, Manager, Supervisor (23)	Professional (160)	Secretarial (89)	Clerical (375)	Senior Manager (53)	Manager (205)	Supervisor (172)	Regular Worker (553)
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Great deal more	8	9	8	8	5	11	8	9	9	4	7	8	11	6	4	10	9
Somewhat more	27	39	27	19	24	29	23	32	31	22	28	27	30	17	23	26	31
No more	62	51	61	71	68	58	65	58	58	70	60	62	58	77	72	62	58
Not sure	2	1	4	2	2	3	4	1	1	4	5	3	1	*	3	2	2

Relationship between chair improvements and quality of work.

Table V-18

Q.: If your (your employees') chair were improved, do you feel the quality of your (your employees') work would improve, or not?

(Number of respondents)	Total Office Workers (996)	Total Executives (200)
	%	%
Would improve	26	38
Would not improve	70	53
Not sure	5	9

Chapter VI:

The Future.

A. Introduction

This chapter discusses the impact of comfort on employees' work. It discusses office workers' say in determining various office conditions and the importance to employees of having a say in these decisions. Physical changes which office workers would make to improve their comfort in the office are identified, as are various improvements for which office workers are willing to sacrifice pay. Lastly, management's concern for employee comfort is discussed.

B. How Comfort Affects Job Performance

Over half of the office workers (58%) and executives (57%) feel that employees' job performance is affected a great deal by how comfortable they feel in their office.

How comfort affects the job performance of office workers.

Table VI-1

Q.: Generally, would you say that how comfortable you (your employees) feel in the office affects how well you (your employees) do your job a great deal, somewhat, hardly at all, or not at all?

(Number of respondents)	Total Office Workers (1,004)	Total Executives (203)
	%	%
Affects a great deal	58	57
Somewhat	34	40
Hardly at all	6	3
Not at all	2	-

C. Impact of Comfort on Doing More Work in a Day

According to 53% of the office workers and 63% of the executives, employees would be able to do more work in a day if conditions in their offices were changed to make them more comfortable.

Younger employees are more optimistic than older employees about being able to do more if their office conditions were changed to make them more comfortable. For example, 61% of the employees in the 18-to-29 age group feel this way, compared to 56% of the employees in the 30-to-39 age group, and only 45% of the employees 40 years and older.

Other workers who more often associate improvements in comfort with productivity are employees who work in a bullpen (pool) type of office (63%), regular workers (58%), persons employed in the business and professional services industries (60%), and persons employed in the banking and investment industry (61%).

Impact of comfort on doing more work in a day.

Table VI-2

Q.: If conditions in your (your employees') office were changed to make you (your employees) more comfortable, would you (your employees) be able to do more in a day, or not?

(Number of respondents)	Total Office Workers (1,002)	Total Executives (202)
	%	%
Would be able to do more	53	63
Would not be able to do more	40	31
Not sure	7	6

Impact of comfort on doing more in a day; demographic data.

Table VI-2a

Q.: If conditions in your office were changed to make you more comfortable, do you feel you would be able to do more in a day, or not?

	(Number Of Respondents)	Would be Able To Do More	Would Not Be Able To Do More	Not Sure
		%	%	%
Total Office Workers	**(1,002)**	**53**	**40**	**7**
Age				
18-29 years	(309)	61	31	7
30-39 years	(281)	56	37	7
40 and over	(411)	45	49	6
Type of Office				
Conventional	(289)	47	48	5
Bullpen	(198)	63	31	6
Open plan	(365)	57	36	8
Job Type				
Executive, manager, supervisor	(23)	48	48	4
Professional	(162)	57	37	6
Secretarial	(89)	53	39	8
Clerical	(383)	55	38	8
Job Level				
Senior manager	(54)	50	43	7
Manager	(206)	46	50	4
Supervisor	(171)	49	43	8
Regular worker	(562)	58	35	7
Industry				
Manufacturing	(189)	51	42	7
Government	(147)	56	35	9
Health and education	(74)	45	47	8
Communications and public services	(94)	51	43	6
Business and professional services	(82)	60	35	5
Insurance and real estate	(108)	51	44	6
Banking and investments	(79)	61	28	11

D. Impact of Comfort on the Quality of Work

According to 48% of office workers and 59% of executives, the quality of employees' work would improve if their offices were made more comfortable. Once again, younger employees are more optimistic than older employees, with 53% of those in the 18-to-29 age group feeling the quality of their work would improve, compared to 49% in the 30-to-39 age group, and only 42% of those 40 years and over.

Office workers volunteer that, if office conditions were changed to make them more comfortable, the quality of their work would improve due to better concentration on the job (32%), increase of productivity (27%), fewer errors (20%), more efficiency (17%), and more effort put into their work because of increased motivation (17%).

Executives have somewhat different opinions about how the quality of the employees work would improve if they had improved office conditions. The largest number feel that there would be fewer errors by employees (42%), followed by an increase in productivity (29%), better concentration on the job (25%), more effort into work because of increased motivation (20%), and increased efficiency (12%).

Impact of comfort on the quality of work.

Table VI-3

Q.: If your office were made more comfortable, do you feel that the quality of work would improve, or not?

Q.: If your company's offices were made more comfortable, do you feel that the quality of work would improve, or not?

(Number of respondents)	Total Office Workers (1,003)	Total Executives (203)
	%	%
Quality would improve	48	59
Quality would not improve	46	34
Not sure	7	7

Impact of comfort on the quality of work; demographic data.

Table VI-3a

Q.: If your office were made more comfortable, do you feel that the quality of your work would improve, or not?

	(Number Of Respondents)	Quality Would Improve	Quality Would Not Improve	Not Sure
	%	%	%	%
Total Office Workers	**(1,003)**	**48**	**46**	**7**
Age				
18-29 years	(309)	53	40	7
30-39 years	(281)	49	43	8
40 and over	(412)	42	52	6
Type of Office				
Conventional	(289)	41	55	4
Bullpen	(197)	55	37	8
Open plan	(366)	52	41	7
Job Type				
Executive, manager, supervisor	(23)	30	70	-
Professional	(162)	51	44	6
Secretarial	(89)	45	48	7
Clerical	(383)	48	45	8
Job Level				
Senior manager	(54)	39	59	2
Manager	(206)	42	52	5
Supervisor	(172)	52	40	8
Regular worker	(562)	49	44	7
Industry				
Manufacturing	(190)	47	47	6
Government	(147)	57	39	4
Health and education	(74)	42	53	5
Communications and public services	(94)	48	39	13
Business and professional services	(82)	44	46	10
Insurance and real estate	(108)	44	52	4
Banking and investments	(79)	51	42	8

Ways in which the quality of office workers' work would be improved if conditions were made more comfortable.

Table VI-4

Q.: In what ways do you feel that the quality of your work (office work) would improve?

(Number of respondents)	Total Office Workers (477)	Total Executives (119)
	%	%
Better concentration on job	32	25
Increase of productivity	27	29
Fewer errors	20	42
Efficiency	17	12
More effort into work, increase motivation	17	20
Work faster	10	5
Less stress, strain	7	5
All other mentions	7	9
Do not know, no answer	2	3

Note: The percentages refer to respondents who say the quality of their work would improve if their office conditions were made more comfortable.

E. Office Worker Say in Determining Various Office Conditions

Office workers feel they now have at least some say in getting whatever they need to feel comfortable in their job (58%), having a place to work without being distracted (42%), and the type of desk surface and filing equipment and storage they use (42%). They feel they have little or no say in determining the most comfortable working temperature (73%), the type lighting that's best for the work they do (67%), having a place to relax (66%), and the type of office chairs they have (64%). Of the executives, 63% feel that office workers have at least some say in the office with regard to getting whatever they need to feel comfortable in their job, 45% that they have a say in the type of desk surface and filing equipment and storage they use, and 45% that they have a say in the type of office chairs they have.

Most executives agree that office workers have little or no say in determining the most comfortable working temperature (83%), having a place to relax (68%), the type of lighting that's best for the work they do (62%), and the amount of space that they need for their job (62%).

Office worker say in determining various office conditions.

Table VI-5

Q.: How much of a say do you and your work group (your employees) have in the following? Do you and your work group have a lot of say, some say, not too much say, or no say at all in (ITEM)?

(Number of respondents)	Total Office Workers (1,004)					Total Executives (203)				
	A Lot Of Say	Some Say	Not Too Much Say	No Say At All	Not Sure	A Lot Of Say	Some Say	Not Too Much Say	No Say At All	Not Sure
	%	%	%	%	%	%	%	%	%	%
Getting whatever they/you need to feel comfortable in their job	18	40	21	21	*	12	51	24	11	1
Having a place to work without being distracted	15	27	23	35	1	8	33	43	14	1
The type of desk surface and filing equipment and storage they/you use	15	27	22	35	1	7	38	33	21	1
The amount of space they/you need for their/your job	13	26	24	36	1	6	32	39	23	-
The type of office chairs they/you have	14	20	19	45	1	12	33	29	25	1
Having a place to relax	12	20	20	46	1	9	23	36	32	*
The type of lighting that's best for the work they/you do	12	20	18	49	1	10	29	34	28	-
The most comfortable working temperature for their/your job	9	16	20	53	1	5	12	30	53	-

*Less than 0.5%

Office workers say in determining various office conditions; demographic data.

Table VI-5a

Q.: Do you and your work group have any say in (ITEM)?

(Number of respondents)	Total (1,004)	Job Type: Executive, Manager, Supervisor (23)	Job Type: Professional (162)	Job Type: Secretarial (89)	Job Type: Clerical (384)	Job Level: Senior Manager (54)	Job Level: Manager (206)	Job Level: Supervisor (172)	Job Level: Regular Worker (563)	Industry: Manufacturing (190)	Industry: Government (147)	Industry: Health And Education (74)	Industry: Communications And Public Services (94)	Industry: Business And Professional Services (82)	Industry: Insurance And Real Estate (108)	Industry: Banking And Investments (80)	Region: East (288)	Region: Midwest (303)	Region: South (236)	Region: West (177)	Type Of Office: Conventional (289)	Type Of Office: Bullpen (198)	Type Of Office: Open Plan (366)	Office Occupancy: Private (339)	Office Occupancy: Shared (662)
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Getting whatever you need to feel comfortable in your job	57	70	60	62	48	76	65	62	52	59	53	64	54	63	56	61	50	59	65	58	70	45	53	64	55
Type of desk surfaces and filing equipment and storage you use	42	74	39	47	34	65	54	45	34	44	34	47	44	46	39	45	39	42	49	38	54	29	37	47	39
Having a place to work without being distracted	42	65	47	42	32	57	56	46	33	41	34	53	33	56	39	51	38	37	49	46	53	28	36	51	37
Amount of space you need for your job	39	65	41	40	32	57	47	43	33	41	32	41	37	41	41	43	40	37	42	37	52	29	35	42	37
Type of office chairs you have	35	61	31	44	28	59	45	34	29	42	32	36	34	46	27	38	29	33	43	36	48	22	29	41	31
Having a place to relax	33	52	34	43	31	56	34	30	31	29	26	43	33	34	35	45	28	27	41	39	42	26	30	34	32
Type of lighting that's best for the work you do	32	57	33	37	29	52	37	26	30	35	27	38	26	44	29	34	33	28	38	29	42	23	26	38	29
Most comfortable working temperature for your job	26	30	25	31	22	26	32	24	24	24	21	32	22	29	28	28	24	25	30	26	31	22	21	27	26

Note: The percentages refer to respondents who have a lot of say and some say.

F. Importance of Having a Say in Office Decisions

Office workers indicate that it is very important for them to have a say in the type of lighting that's best for the work they do (54%), having a place to work without being distracted (48%), the most comfortable working temperature for their job (47%), and the type of office chairs they have (45%).

Executives, in most cases, correctly estimate the importance to office workers of having a voice in these areas, but somewhat underrate "having a place to work without being distracted" as important to them.

Importance of determining various office conditions to office workers.

Table VI-6

Q.: How important is it for you personally (your employees) to have a say in (ITEM) — very important, somewhat important, hardly important, or not at all important?

	Office Workers (1,001)					Executives (203)				
	Very Important	Somewhat Important	Hardly Important	Not At All Important	Not Sure	Very Important	Somewhat Important	Hardly Important	Not At All Important	Not Sure
	%	%	%	%	%	%	%	%	%	%
The type of lighting that's best for the work you/they do	54	32	8	6	*	39	39	11	8	1
Having a place to work without being distracted	48	37	10	5	*	25	58	12	2	2
The most comfortable working temperature for your/their job	47	41	8	5	*	29	48	17	5	*
The type of office chairs you/they have	45	38	10	7	*	34	44	15	6	1
Getting whatever you/they need to feel comfortable in your/their job	44	47	6	3	*	27	56	10	5	1
The amount of space you/they need for your/their job	38	45	11	6	*	17	60	15	7	1
Having a place to relax	32	42	17	9	*	23	42	26	8	2
The type of desk surface and filing equipment and storage you/they use	28	46	17	9	-	18	57	16	7	1

*Less than 0.5%

Importance of determining various office conditions to office workers; demographic data.

Table VI-6a

Q.: How important is it for you personally to have a say in (ITEM) — very important, somewhat important, hardly important, or not at all important?

(Number of respondents)	Total Office Workers (1,001)	Region				Sex		Type Of Office			Job Type				Industry						
		East (287)	Mid-west (303)	South (236)	West (175)	Male (420)	Female (581)	Conventional (288)	Bullpen (197)	Open Plan (365)	Executive, Manager, Supervisor (23)	Professional (161)	Secretarial (89)	Clerical (383)	Manufacturing (189)	Government (147)	Health And Education (74)	Communications And Public Services (94)	Business And Professional Services (80)	Insurance And Real Estate (108)	Banking And Investments (80)
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
The type of lighting that's best for the work you do	54	57	44	61	55	50	57	56	58	50	43	55	57	56	54	55	65	56	53	53	50
Having a place to work without being distracted	48	44	43	61	45	53	45	56	41	47	57	57	45	38	43	47	53	47	61	48	59
The most comfortable working temperature for your job	47	50	39	53	45	38	53	49	46	46	43	41	57	50	42	50	54	49	44	45	54
The type of office chairs you have	45	42	37	58	46	35	52	52	45	41	43	33	57	49	45	48	46	47	46	41	55
Getting whatever you need to feel comfortable in your job	44	43	36	55	45	40	47	52	42	42	22	47	56	43	40	48	50	44	48	39	53
The amount of space you need for your job	38	34	36	48	32	38	37	44	31	35	22	35	36	36	38	37	49	36	40	32	41
Having a place to relax	32	30	27	39	36	27	36	34	35	29	17	31	32	35	26	33	34	37	34	37	38
The type of desk surfaces and filing equipment and storage you use	28	23	22	40	29	27	28	34	26	25	26	25	32	27	31	33	26	30	30	21	34

Note: The percentages refer to respondents who answered "very important."

G. Physical Changes That Office Workers Would Make to Improve Their Comfort in the Office

If office workers could make changes in the physical aspects of their office, they would more often improve the heating and air conditioning, regulate the temperature to make it more comfortable, obtain more space, get more privacy, reduce the noise level, and obtain new, better, or more comfortable office and lounge chairs.

If executives had the power to make changes, they would, in rank order, reduce the noise level, improve the lighting, obtain more space, get more privacy, and regulate the temperature better.

Physical office changes which would make the office more comfortable.

Table VI-7

Q.: Let's start off by supposing you had the power to change anything you wanted to change in your office so that it would be a more comfortable place to work. What two or three things would you change to make your office more comfortable to you?

(Number of respondents)	Total Office Workers (993)	Total Executives (203)
	%	%
Temperature/Air Circulation		
Better heating and/or air conditioning	20	10
Regulate temperature better; better temperature control	13	11
Windows, more windows, windows that open	11	8
Better, more equipment	5	7
Poor ventilation, better air circulation	3	3
All other temperature/air circulation mentions	2	2
Physical Environment		
More privacy, better privacy features	11	11
Too noisy, reduce noise level	9	14
Poor, inadequate, harsh lighting	8	12
Eliminate smoking; limit smoking to certain areas	2	-
All other physical environment mentions	8	5
Space		
More office space, too small; bigger general office area	11	12
Change furniture arrangement and office design	8	10
More personal working space, need more room, would like my own room	8	7
More storage space, filing space, drawer space	4	9
Prefer doors and walls to dividers	2	4
All other space mentions	5	5
Interior Decorating		
New, better, more comfortable office and lounge chairs	9	6
Carpeting, rugs	6	7
New desks, bigger desks, better desks	4	2
Color of walls, paint	3	6
New furniture (unspecific)	3	7
All other interior decorating mentions	8	15
Miscellaneous		
Change management/ administration	3	-
Better telephone arrangements	3	*
Flexible hours, change hours	3	*
None, no changes	10	16
Not sure, no answer	*	*

*Less than 0.5%

H. Office Workers' Willingness to Sacrifice Pay for Office Improvements

If office workers had a choice between a pay raise with no office improvements and a smaller raise with an office which had various improvements, over half of the office workers would choose a raise with no improvements.

Some of the office workers, however, would choose a smaller raise if they had control over the air conditioning and heating (30%), improvements in the general comfort of their office (27%), and a specially designed chair for their back support and comfort (26%), a door they could close for privacy (21%), and a quieter office (20%).

Somewhat fewer office workers would choose a smaller raise if they had a window with a view, office furniture that they had chosen themselves, an office decorated to their taste, carpeting, an office that was more accessible to the people they work with, and one that was in an executive area.

Executives were asked which of these options they thought office workers would choose if they were given a greater say in the furnishing and decorating of their personal office or workspace rather than a large pay raise. Executives judge the most often preferred would be control over air conditioning and heating, followed by decoration to their taste, a window with a view, office furniture that they had chosen themselves, a door that could be closed for privacy, and a quieter office.

Items which executives feel that their company would consider giving office workers as a reward for performance are decoration to their taste, a door they could close for privacy, carpeting, office furniture that they had chosen themselves, more quiet, and more comfort in general.

Although having air conditioning and heating that they could control ranks first among office workers who would be willing to have a smaller raise with improvements, it ranks eleventh among executives as an item that they feel their company would consider as a reward for job performance. (This discrepancy is probably due to the fact that under the current energy regulations, executives do not have discretion to make the temperature changes.)

As stated, having a specially designed chair for back support and comfort is an item for which office workers would be willing to take a smaller raise. While this factor was mentioned by 26% of the office workers and ranks third, only 9% of the executives feel a specially designed chair would be most attractive to office workers for smaller pay raises and ranked it ninth in importance. Additionally, only 7% of the executives feel that the company would consider a specially designed chair as a reward for job performance.

Executives underrate the importance to office workers of having a specially designed chair for back support and comfort, and they overestimate office workers' desire to have an office that is decorated to their taste.

Office workers willingness to sacrifice pay for office improvements.

Table VI-8

Q.: If you were offered a choice between a pay raise with no office improvements and a smaller raise with an office that (ITEM), which would you choose?

Q.: Some people have suggested that one alternative to large pay raises is to allow employees a greater say in the furnishing and decorating of their personal office or workspace. Which 2 or 3 of the following office options concerning the office environment do you feel would be *most attractive* to the employees of your company?

Q.: And, which 2 or 3 of these office options, if any, do you think your company would be most likely to consider as an incentive or reward for job performance?

	Total Office Workers (1,004)				Total Executives (203)			
(Number of respondents)	Raise With No Improvements	Smaller Raise With Improvements	Already Have (Vol.)	Not Sure	Feel Would be *Most Attractive* To Office Workers For Smaller Pay Raises		Feel That The Company Would Consider As A Reward For Job Performance	
	%	%	%	%	Rank	%	Rank	%
Had air conditioning and heating that you could control	58	30	11	1	1	46	11	6
Was generally more comfortable	60	27	11	2	8	18	6	13
Had a specially designed chair for back support and comfort	56	26	17	1	9	9	10	7
Had a door you could close for privacy	59	21	18	2	5	28	2	18
Was much quieter	69	20	9	1	6	21	5	16
Had a window with a view	59	19	20	2	3	31	7	13
Had office furniture that you had chosen yourself	72	19	6	3	4	31	4	17
Was decorated to your taste	73	15	10	3	2	32	1	22
Had carpeting	56	10	32	2	7	20	3	18
Was more accessible to the people you work with	61	10	27	2	10	9	9	10
Was in an executive area	71	9	18	3	11	7	8	11
None	-	-	-	-	-	9	-	28
Not sure	-	-	-	-	-	*	-	3

*Less than 0.5%

Office workers willingness to sacrifice pay for office improvements; demographic data.

Table VI-8a

Q.: If you were offered a choice between a pay raise with no office improvements and a smaller raise with an office that (ITEM), which would you choose?

(Number of respondents)	Total (1,004)	Age 18-29 (310)	Age 30-39 (281)	Age 40 & Over (412)	Sex Male (421)	Sex Female (583)	Type Of Office Conventional (289)	Type Of Office Bullpen (198)	Type Of Office Open Plan (366)	Job Type Executive Manager Supervisor (23)	Job Type Professional (162)	Job Type Secretarial (89)	Job Type Clerical (384)	Industry Manufacturing (190)	Industry Government (147)	Industry Health And Education (74)	Industry Communications And Public Services (94)	Industry Business And Professional Services (82)	Industry Insurance And Real Estate (108)	Industry Banking And Investments (80)
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Was more quiet	20	20	22	19	19	22	15	28	23	13	17	21	20	16	24	19	18	17	22	25
Had air conditioning and heating that you could control	30	33	29	30	31	29	27	32	31	39	30	27	34	21	37	31	26	29	31	38
Had a door you could close for privacy	21	26	20	18	18	23	14	25	27	9	18	19	23	18	23	16	17	18	26	13
Had a window with a view	19	25	19	15	17	20	17	20	22	9	20	10	24	20	19	22	12	13	19	18
Was decorated to your taste	15	21	12	11	13	16	13	15	18	17	14	8	17	13	18	12	7	13	14	21
Had a specially designed chair for back support	40	29	29	53	35	46	31	39	47	30	29	47	49	23	29	32	20	26	27	48
Had carpeting	10	14	11	6	10	11	6	11	13	4	13	9	11	9	11	11	9	12	9	15
Was more accessible to the people you work with	10	12	10	8	13	10	9	16	10	13	7	8	10	7	13	14	11	13	10	11
Was in an executive area	9	14	6	6	7	10	6	13	9	-	10	11	9	5	13	9	7	10	12	15
Had office furniture you had chosen yourself	19	17	17	14	16	20	18	22	20	9	17	12	21	21	20	22	17	18	18	28
Was generally more comfortable	27	31	25	22	24	30	22	32	32	22	29	20	29	21	33	31	29	28	28	28

I. Management Concern for Employee Comfort

Almost three-fourths (73%) of the office workers feel that their management is very or somewhat concerned with the way comfort affects employees' *job performance*. A higher 94% of the executives feel that top management is very or somewhat concerned with the way employee comfort affects their job performance.

Almost one-quarter of the office workers and 5% of the executives feel that the management of their company is hardly or not at all concerned with the way comfort affects the employees' job performance.

Government employees are particularly vocal in expressing their views regarding management's lack of concern: almost one-third (30%) of them say that their managers are hardly or not at all concerned with the way comfort affects their job performance.

Forty-one percent of the office workers feel their immediate supervisor is very concerned about their comfort on the job; 38% feel their supervisor is somewhat concerned; and 13% say their supervisor is hardly concerned.

Asked about how much *management* is concerned with office worker comfort on the job, 29% of office workers say that management is very concerned; 44% say somewhat concerned; and 26% say hardly or not at all concerned.

Of the executives, 63% feel that top management is very concerned with employee comfort, 33% feel it is somewhat concerned, and only 4% think that management is hardly or not at all concerned with office worker comfort on the job.

Three-fourths of the executives report that their company is in general very concerned with employee comfort, 22% feel it is somewhat concerned, and only 3% of them feel the company is hardly or not at all concerned.

Office workers and executives have rather different opinions about the concern of management for office workers' comfort.

Managements' concern for office workers' comfort.

Table VI-9

Q.: Do you feel that your immediate supervisor is very concerned, somewhat concerned, hardly concerned, or not at all concerned with your comfort on the job?

Q.: How about the management of your company — do you feel they are very concerned, somewhat concerned, hardly concerned, or not at all concerned with the comfort of their employees?

Q.: And is the management of your company very concerned, somewhat concerned, hardly concerned, or not at all concerned with the way comfort affects their employees' job performance?

Q.: From what you know as an office decisionmaker, would you say your company is very concerned, somewhat concerned, hardly concerned, or not at all concerned about employee comfort on the job?

Q.: And how about the top management of your company — do you feel they are very concerned, somewhat concerned, hardly concerned, or not at all concerned with the comfort of their employees?

Q.: And is the top management of your company very concerned, somewhat concerned, hardly concerned, or not at all concerned about the way comfort affects their employees' job performance?

	Very Concerned	Somewhat Concerned	Hardly Concerned	Not At All Concerned	Not Sure
(Number of respondents: 1,003)	%	%	%	%	%
Office Workers					
Immediate supervisor concern with office worker comfort on job	41	38	13	7	1
Management concern with office worker comfort on job	29	44	17	9	2
Management concern with the way office worker comfort affects their job performance	33	40	15	9	3
(Number of respondents: 203)					
Executives					
Company concern with employee comfort	75	22	3	*	*
Top management concern with employee comfort	63	33	4	*	*
Top management concern with the way employee comfort affects their job performance	63	31	4	1	1

*Less than 1%

Appendix A:

Methodology and Technical Details.

A. Methodology

1. Background:

The 1978 and 1980 studies were both based on in-home interviews with persons 18 years or older who have been in their office job for six months or more, and who work for organizations which employ 25 or more persons.

In 1978, office workers, executives, and professional office designers were interviewed, but the latter group was not included in the 1980 survey, since office planning and design was a less important component of it.

The sample size of both studies was similar. In 1978, 1,047 office workers were interviewed, compared to 1,004 in 1980. In 1978, 209 executives were interviewed, compared to 203 in 1980.

2. The Sample Design:

The cross section of office workers was based on the Harris national cross-section samples, but using only urban and suburban points falling into the top 100 metropolitan areas of the United States (in population) in order to reduce inefficiency in gathering data, and to reflect the areas of the country where most qualifying office workers were reached in the previous survey.

The national cross section consisted of 1,004 office workers living in the United States, excluding Alaska and Hawaii.

The identity of the survey's sponsor was not revealed during the course of the interview. Anonymity of all respondents was guaranteed.

The executives to be interviewed were chosen using a systematic random interval sample based on the 1979 Fortune magazine directory of 1,300 U.S. industrial, commercial banking, life insurance, financial, retailing, transportation and utility companies. The sample consisted of 203 corporate decisionmakers with the "greatest influence on office design and planning, including but not limited to office furniture selection."

3. Questionnaire Development:

The development of the questionnaire was based on the use of a focus group, or a small discussion group, of 15 qualifying office workers. These office workers selected from a range of job types and industries, were guided by an experienced moderator from Louis Harris and Associates, Inc., in a discussion of comfort factors in the office. The discussion was taped and analyzed prior to developing the first draft of the questionnaire. It assisted in the development of the questionnaire by focusing in on issues which provoke the most interest and detailed response among office workers. The guide for the focus group discussion was the responsibility of Louis Harris and Associates, Inc.

Detailed survey questionnaires were designed using a combination of structured, unstructured, and projective questions. The questionnaires were pre-tested with a sample of 25 respondents to determine the meaningfulness of the questions; to screen out questions which evoke a unanimous response; and to test the flow and length of the questionnaires. The questionnaires were fielded during the period from January 1 through January 28, 1980. The average length of interviewing time was 51 minutes for office workers and 52 minutes for executives.

The field work was directed by the New York office of Louis Harris and Associates. The survey was controlled and supervised by the Harris Field Director and Regional Supervisor. Field kits were delivered to interviewers containing copies of questionnaires, area maps, and detailed instructions for completing the interviews including information about the objectives of the study, how to interpret the meaning of certain questions, and schedules for completion of interviews. All interviews with executives were carried out by executive interviewers belonging to the Harris executive field force under the control of the Executive Field Director.

Each interviewer's work was closely monitored to ensure that all results conformed to the original sample design. Completed questionnaires were sent to the New York office for checking and to an independent validation service which checked each interviewer's respondents to make sure that all interviews were properly conducted and completed according to Louis Harris and Associates specifications.

4. Editing, Coding, and Tabulation of the Data:

After the questionnaires were validated, they were edited and coded for computer processing. Ten percent of the responses were used to build codes for open-ended questions, all of which were checked by key project staff.

Data from the questionnaires were then keypunched onto cards and subsequently transferred to magnetic tape. The data were tabulated on an IBM 370 computer using a special software program designed for survey research and capable of performing a full range of statistical operations.

B. Characteristics of Office Workers and their Work Environment

Almost one-third (30%) of the respondents are under 30 years of age. Another 48% are 30 to 49 years of age. The remaining 22% are 50 years or over. Most of the respondents are women (58%), and they come from all regions of the United States and are primarily white (89%). (See Table A-1.)

Thirty-seven percent of the office workers have had some college education. Another 38% have had four years of college or have undertaken postgraduate studies.

Over half (54%) of the office workers have a household income between $15,001 and $35,000. Almost one-fifth (19%) have an annual household income of $35,000 and over; one-fourth (26%) have an annual household income of $15,000 or less.

Office workers are employed in all types of industries. The largest numbers work in government services (15%) and heavy manufacturing (15%), followed by insurance and real estate (11%), banking and investment (8%), and retail (7%). Office workers are also employed in public services (utilities, telephone and electric), professional services, hospitals and nursing homes, business services, communications, education, teaching, and colleges, transportation and repairs, light manufacturing, social services, and the mining, oil, and coal industries.

Office workers estimate that the median number of employees who work in the branch or location of their organization where they work is 101 persons. The mean number of years that office workers have been employed in their present job is 4.8 years.

The majority (56%) of the office workers are regular workers. An additional 17% have a job at the supervisory level, 21% have a management level job, and 5% have a job at the senior management level.

Most of the office workers (38%) have clerical jobs. Other kinds of work undertaken by office workers are accounting, bookkeeping, and financial (22%), office administration (16%), professional (16%), managerial (16%), supervisory (11%), engineering (9%), secretarial (9%), and data processing and computer (8%).

Since 1978, there seems to have been a dramatic decrease in the use of conventional offices and an increase in the use of the open plan and bullpen (pool) types of offices, which follows what was said about the future in the 1978 study. One of the criteria behind the development of specific plans that corporate office decisionmakers and design professionals felt in 1978 would gain most in importance over the next ten years was "adaptability to changes in the work force." The study further reported that "the open plan office concept affects approximately 3 in 10 office workers today, is likely to affect more in the future, and yet is little understood by office workers."

According to the 1980 study, 29% of the office workers report that they work in a conventional office, down 10 percentage points from the 39% who reported it in 1978. The percentage of office workers working in the open plan type of office has increased from 30% in 1978 to 36% in 1980. The percentage of office workers who work in the bullpen (pool) type of office has increased from 14% in 1978 to 20% in 1980.

Since 1978, there has been a distinctive trend towards an increase in the sharing of workspaces. In 1978, 54% of the office workers shared their space, while 45% had their own. In 1980, the percentage of office workers who share their workspace is 65%, while 34% do not share it.

Office workers in 1980 spend a mean of 6.3 hours a day in their personal workspace, slightly more than the time spent at their personal workspace in 1978 (6.1 hours).

On the average, office workers in 1980 spend 71% of their day sitting at their desk or other work surface, compared to 66% of their time in 1978. (See Table A-2.)

Office workers who spend more than the average 71% of the day sitting at their desk or personal workspace are secretaries (79%). (See Table A-3.)

Characteristics of the sample of office workers.

Table A-1

	Number In Sample	Percentage Of Sample
	#	%
Total Office Workers	1,004	100
Region[a]		
East	288	29
Midwest	303	30
South	236	24
West	177	18
Age		
18-20	3	3
21-24	105	10
25-29	173	17
30-34	149	15
35-39	132	13
40-49	199	20
50-64	206	21
65 and over	7	1
Education		
8th grade or less	2	*
Some high school	18	2
High school graduate	227	23
Some college	264	27
Two year college graduate	96	10
Four year college graduate	207	21
Postgraduate	162	17
Income		
$7,500 or less	42	4
$7,501 to $15,000	218	22
$15,001 to $25,000	305	30
$25,001 to $35,000	238	24
$35,001 to $50,000	149	15
$50,000 and over	36	4
Sex		
Male	421	42
Female	583	58
Ethnic Group or Racial Background		
White, but not Hispanic	889	89
Black, but not Hispanic	64	8
Spanish-American (Mexican, Cuban, Puerto Rican, Central or South American)	31	3
Asian (Oriental) or Pacific Islander	14	3
American Indian or Alaskan native	1	*
Length of Employment in Current Job		
Less than 1 year	139	14
1 year to 1 year, 11 months	145	14
2 years to 2 years, 11 months	134	13
3 years to 5 years, 11 months	185	18
6 years to 10 years, 11 months	184	18
11 years and over	214	21
Mean: 4.8 years		
Size of Company or Organization (number of employees)		
100 or less	143	14
101-500	139	14
501-5,000	272	27
Over 5,000	209	21
Mean: 502 employees		
Median: 101 employees		
Size of Branch of Company Where Office Worker is Located		
100 or less	473	47
101-500	301	30
501-5,000	156	16
Over 5,000	17	2
Job Level		
Senior Manager	54	5
Manager	206	21
Supervisor	172	17
Regular worker	563	56
Job Type		
Clerical	384	38
Accounting, bookkeeping, financial	225	22
Office administration	163	16
Professional	162	16
Managerial	161	16
Supervisory	114	11
Engineering	90	9

Secretarial	89	9
Data Processing/computer	82	8
Executive/corporate	54	5
Medical: social work, counselling	47	5
Customer service	43	4
Typing, work processing, editing	43	4
Sales	39	4
Operative/machine operator	29	3
Executive	23	2
Personnel	23	2
Order entry/supplies	21	2
Technician	17	2
Traffic distribution	15	2
Any other answer	10	5
Type of Office		
Conventional	289	29
Open plan	366	36
Bullpen	198	20
None	144	14
Percentage of Office Workers Sharing Their Workspace		
None	339	34
1	107	11
2-5	212	21
6-10	122	7
11-20	74	6
21 and over	147	11
Hours Spent in Workspace		
Less than 1 hour	5	*
1-2 hours	13	1
2 hours, 1 minute to 3 hours	27	1
3 hours, 1 minute to 4 hours	44	3
4 hours, 1 minute to 5 hours	87	4
5 hours, 1 minute to 6 hours	159	16
6 hours, 1 minute to 7 hours	250	25
7 hours, 1 minute to 8 hours	345	34
Over 8 hours	72	7
Mean: 6.3 hours	2	*
Percentage of Day Spent Sitting at a Desk or Other Work Surface		
0%		
1-25%	66	7
26-50%	121	12
51-75%	285	28
76-99%	448	45
100%	82	8
Mean: 71%		
Median: 76%		
Type of Industry		
Government	147	15
Heavy manufacturing	146	15
Insurance/real estate	108	11
Banking/investment	80	8
Retail	75	7
Public service - (utilities: telephone, electric)	58	6
Professional services	45	4
Hospital/medical/nursing home	38	4
Business services	37	4
Communications	36	4
Education/teaching/colleges	36	4
Transportation and repairs	35	3
Light manufacturing	30	3
Social Services	24	2
Mining/oil/coal	18	2
All others	82	8

*Less than 0.5%

Notes: Subgroups may not add up to 1,004 (100%) due to some non-response.

a

East includes: Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and West Virginia.

Midwest includes: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.

South includes: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia.

West includes: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

Percentage of office worker's day spent sitting at a desk or other work surface.

Table A-2

Q.: In an average day, what percentage of your working time would you estimate you spend sitting at your desk or other work surface?

(Number of respondents)	1980 Office Workers (1,004)	1978 Office Workers (1,047)
	%	%
0%	-	1
1-25%	7	10
26-50%	12	15
51-75%	28	26
76-99%	45	40
100% (all)	8	7
Not sure	*	*
Mean	70.7	66.2
Median	77.6	73.7

*Less than 0.5%

Percentage of office worker's day spent sitting at a desk or other work surface; demographic data.

Table A-3

Q.: In an average day, what percentage of your working time would you estimate you spend sitting at your desk or other work surface?

		Sex		Job Type				Job Level			
(Number of respondents)	Total (1,004)	Male (421)	Female (583)	Executive, Manager, Supervisor (23)	Professional (162)	Secretarial (89)	Clerical (384)	Senior Manager (54)	Manager (206)	Supervisor (172)	Regular Worker (563)
	%	%	%	%	%	%	%	%	%	%	%
0% (none)	-	-	-	-	-	-	-	-	-	-	-
1-25%	7	7	6	4	7	1	7	7	5	9	5
26-50%	12	19	7	26	13	3	9	20	19	9	10
51-75%	28	34	25	22	33	31	22	33	34	34	24
76%-99%	45	34	52	48	40	55	53	37	33	42	51
100% (all)	8	6	10		7	9	9	2	8	6	10
Not sure	*	*	*			*			*		*
Mean	71	66	74	66	69	79	74	64	66	68	74
Median	78	69	81	74	74	82	82	68	69	74	81

*Less than 0.5%

C. Characteristics of Executives and Their Office Environment

A plurality (42%) of the executives interviewed in this study are 50 years of age or over and most of them are males (81%). (See Table B-1.)

They are employed in companies which have a median of 8,900 employees nationwide, and about one-third (32%) of the employees in the executive's company are office workers.

Over one-third (34%) of the executives are involved in managing office services and operations or are specialist managers. Another 16% are corporate officers, 11% are engineering managers, and another 11% are administrative managers. The remainder are divided among several specialties.

Executives see themselves as having considerable responsibility for the physical environment of their offices. Most of them (82%) are vice president, director of engineering and project manager in the engineering group (18%); president (8%); director of facilities management (8%); and area manager (8%).

Almost three-fourths (73%) of the executives describe their main job in relation to the physical office environment as maintaining the facilities, providing facilities services, and making policy on the type and use of equipment.

About half (52%) of the executives have jurisdiction over 50% or less of the company's total office facilities. One-quarter (25%) of the executives have control over *all* of the company's total office facilities.

The executives interviewed in this study are directly involved in decisions to change or modify office space (87%); selection of office furniture (83%); selection of office chairs (83%); decisions about lighting (72%); and selection of office equipment other than furniture (67%). To a lesser degree, they are directly involved in decisions about ventilation, heating and air conditioning (61%) and decisions about energy conservation (55%). (See Table B-2.)

Characteristics of the sample of executives.

Table B-1

	Number In Sample	Percentage In Sample
	#	%
Total Executives	203	100
Age		
18-20 years	-	-
21-24 years	2	1
25-29 years	14	7
30-34 years	24	12
35-39 years	20	10
40-49 years	57	28
50-64 years	84	42
65 years and over	1	*
Sex		
Male	164	81
Female	39	39
Size of Company or Organization		
0-2,000	17	8
2,001-5,000	49	24
5,001-10,000	34	17
10,001-25,000	39	19
Over 25,000	47	23
Mean 22,200		
Median 8,900		
Percentage of Employees Who Are Office Workers in the Company		
1-25%	80	40
26-50%	62	31
51-75%	16	8
76-99%	25	12
100% (all)	8	4
Mean 38.7		
Median 32.3		

Total Square Footage of Office Facilities		
100,000 square feet or less	26	13
100,001-500,000	39	19
500,001-1,000,000 square feet	16	8
1,000,001-5,000,000 square feet	28	14
Over 5,000,000 square feet	8	4
Other/not sure/no answer	13	*
Position in Company or Organization		
Office services manager (operations)/ building manager	65	34
Vice president	32	16
Purchasing agent	22	11
Director of administration/administrative services	18	9
Planning and design coordinator	19	9
Interior design	8	4
Chief engineer/facility engineer	6	3
Director corporate real estate	4	2
Director facilities and construction (building and construction)	4	2
Take care of outfitting all offices/treasure	2	1
Any other answer	21	10
Title of Executives, Other Executives Who Have Direct Responsibility for Factors That Affect the Physical Comfort of Office Workers		
Vice president	54	32
Director of engineering/project manager in the engineering group	37	18
President	16	8
Director of facilities management	16	8
Area managers	16	8
Administration officer/director of administration services	13	6
Facilities designers/interior designers	10	5
Executive vice president/Senior vice president	8	4
Space planner/facilities planner	7	3
Chairman	3	1
Director corporate service	3	1
Assistant vice president	2	1
No one else	4	2
Any other answer	17	6
Main Job		
Maintaining the facilities - facility services - policy making for type and use of equipment	140	73
Personnel/employee relations	12	6
Construction, building operations	9	4
Administration responsibilities	4	2
Engineering	5	2
Trouble shooter	3	1
Any other answer	28	14
Percentage of Company's Total Office Facilities Over Which The Executive Has Jurisdiction		
1-25%	81	39
26-50%	25	13
51-75%	16	8
76-99%	14	7
100%	49	25

Note: Subgroups may not add up to 202 (100%) due to some non-response

Executive involvement in various office environment decisions.

Table B-2

Q.: Are you usually directly involved in (ITEM) or not?

(Number of respondents: 202)	Directly Involved	Not Directly Involved	Not Sure
	%	%	%
Decision to change or modify office space	87	13	*
Selection of office furniture	83	16	*
Selection of office chairs	83	17	*
Decision about lighting	72	27	1
Selection of office equipment other than furniture	67	32	*
Decision about ventilation, heating, air conditioning	61	38	1
Decision about energy conservation	55	44	2

*Less than 0.5%

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About Steelcase

Steelcase is the world's largest manufacturer of office furniture and furniture systems. Founded in 1912 in Grand Rapids, Michigan, the company has become the leader through innovative design, quality construction and the development of a highly skilled dealer organization.

Activities such as this Lou Harris study of office environments are reflections of our concern with the total office environment and the people who work in that environment. The office as a productive element of our society has not received the same attention as other elements of our economy, but today — with over half the work force in "white collar" jobs — the office can no longer be overlooked. We feel that surveys of this nature assist us — and the industry in general — to design products and methods which aid executives and planners in their search to improve both the quality of life and productivity in the office environment during the 1980's.

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